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*Goat.*



*Stag.*



# NATURAL HISTORY

OF ALL THE MOST REMARKABLE

Quadrupeds, Birds, Fishes, Reptiles & Insects,

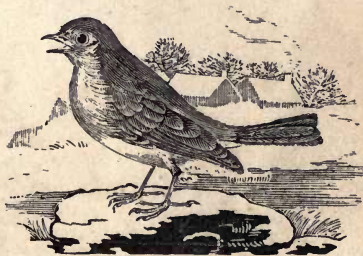
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BY C. MACKENZIE, Esq.

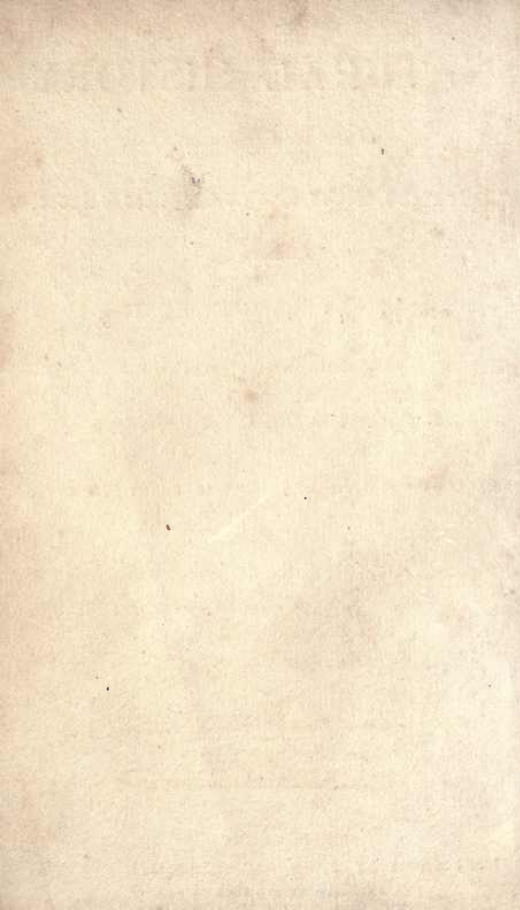
WITH UPWARDS OF ONE HUNDRED BEAUTIFUL CUTS.



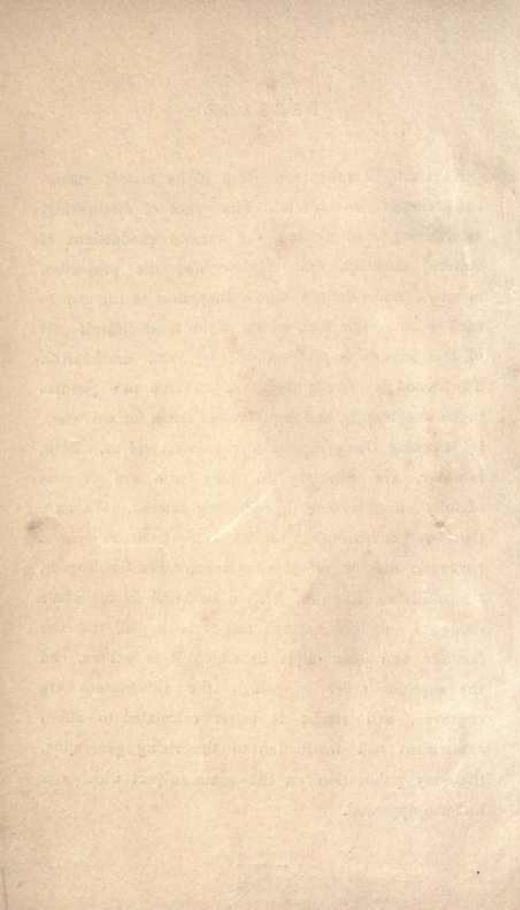
The Robin.—*Winter.*

LONDON :

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NATURAL HISTORY, considered in its utmost extent, comprehends two objects. First, that of discovering, ascertaining, and naming, the various productions of Nature; secondly, that of describing the properties, manners, and relations which they bear to us, and to each other. The first, which is the most difficult part of this science, is systematical, dry, and mechanical. The second is more amusing; it exhibits new pictures to the imagination, and improves our relish for existence, by widening the prospects of nature around us. Both, however, are necessary to those who are desirous of fully understanding this pleasing science. We have therefore endeavoured to lay before our readers a particular account of the most remarkable Quadrupeds, Birds, Fishes, Reptiles, &c., to be found in the whole range of animated nature; and it is hoped, that the familiar and plain style in which it is written, and the superior order in which the Illustrations are engraved, will render it better calculated to afford amusement and instruction to the rising generation, than any publication on the same subject which has hitherto appeared.



TO THE LOVERS  
OF THE  
SUBLIME AND INTERESTING  
Works of Nature,  
IN THE  
ANIMAL CREATION,

*THIS VOLUME*

(Being pre-eminently calculated to awaken due sentiments of the  
power and goodness of Him whose wisdom is over all his works,)

*Is respectfully dedicated,*

BY THEIR OBEDIENT SERVANT,

CHARLES MACKENZIE.



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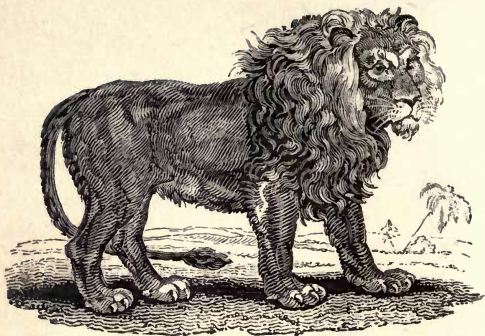
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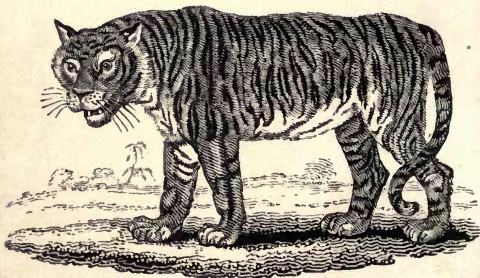
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*Lion.*



*Tiger.*

## THE LION.

THIS noble animal ought justly to stand at the head of the feline race, being at once the most dignified, the strongest, and the most generous of the family. The Lion has a large head, short round ears, a shaggy mane, strong limbs, and a long tail tufted at the extremity. Its general colour is tawny, which on the belly inclines to white. From the nose to the insertion of the tail, a full-grown lion will measure eight feet. The lion is very voracious; requiring from 15 to 20 lbs. of flesh every day, preferring always that of animals recently killed. Night is the principal period when the lion goes in search of prey; —antelopes, buffaloes, and other animals, fall victims to his superior strength: and, it is said, that there are but few animals that can withstand him.

It is in the deserts of Zaara, and the internal parts of Africa, that lions are found most numerous; for here they range without controul. In these wide-stretched regions, little habituated to the power, and unconscious of a superiority in man, they attack him without hesitation, and set him at defiance. A single lion of the desert will often rush upon a whole caravan, and face his enemies, insensible of fear, to the last grasp. On the contrary, such as have acquired some insight in the superior powers of the human race, are frightened away by a shout, and confine their depredations to the defenceless flocks and herds.

The lion is certainly capable of receiving certain impressions, and possesses a docility, which allows him to be tamed in a certain degree. History informs us, that they have been yoked in triumphal cars, and conducted to the battle or the chace; and that, faithful to their master, they have exerted their strength only in his service for defence. When pressed with hunger, however, the lion attacks every animal that comes in his way; but, as his presence is universally dreaded by other quadrupeds, he is frequently obliged to have recourse to artifice, in order to secure his prey.

Though the Lion generally springs upon his prey from some lurking-place, yet there have been instances where he has deviated from his usual method; of this the following

anecdote, related by Dr. Sparrman, furnishes a remarkable proof:—

“A Hottentot, perceiving that he was followed by a Lion, and concluding that the animal only awaited the approach of night to make him his prey, began to consider what was the best mode of providing for his safety, which he at length effected in the following singular manner:—Observing a piece of broken ground, with a precipitate descent on one side, he sat down by the edge of it, and found, to his great joy, that the lion also made a halt, and kept at a distance behind him. As soon as it grew dark, the man, sliding gently forward, let himself down a little below the edge of the steep, and held up his cloak and hat on a stick, at the same time gently moving them backward and forward. The lion, after a while, came creeping gently towards the object; and, mistaking the skin-cloak for the man himself, made a spring, and fell headlong down the precipice. By these means the poor fellow was safely delivered from his horrible and rapacious enemy.”

The lion, while young and active, lives by hunting in the forest at the greatest distance from any human habitation; and seldom quits this retreat while able to subsist by his natural industry; but when he becomes old, and unfit for the purpose of surprise, he boldly comes down into places more frequented, attacks the flocks and herds that take shelter near the habitations of the shepherd or the husbandman and depends rather upon his courage than his address, for support. It is remarkable, however, that when he makes one of these sallies, if he finds men and quadrupeds in the same field, he only attacks the latter, and never meddles with men, unless they provoke him to engage. It is observed, that he prefers the flesh of camels to any other food; he is likewise said to be fond of that of young elephants; these he often attacks before their tusks are yet grown; and, unless the old elephant comes to their assistance, he makes them an easy prey.

The flesh of the Lion, though of a disagreeable flavour, is yet frequently eaten by the negroes; and the skin, which was formerly a robe of distinction for heroes, is now used by those people as a mantle or a bed.

The LIONESS, or female lion, is somewhat smaller than the lion,—she is destitute of a mane, is less patient, and more ferocious in her character.

---

## THE TIGER.

As the lion approximates to some amiable qualities of the dog, so the Tiger copies all the anxious propensities of the cat, to which it bears a strong resemblance in external figure, notwithstanding the disproportion in point of size. His height is three feet, and length 6 ft.;—some much more. As to his strength, it is nearly equal to that of the lion; and he springs upon his prey in the same way as the lion.

Though the most terrible, the tiger is certainly one of the most beautiful of quadrupeds. The glossy smoothness of its hair, and the distinctness of the black streaks with which it is marked on a ground of a bright yellow colour strike the beholder with a kind of pleasing admiration, when it can be surveyed under the idea of security. Providence, however, in bestowing such elegance of form on the most noxious of quadrupeds, seems as if it designed to teach us, that beauty without intrinsic worth is of little estimation.

This animal is peculiar to Asia, and is most common in the East Indies. Neither force nor caresses have the least influence on its stubborn nature; with equal malignity it will snap at the hand by which it is either fed or chastised. With a countenance neither indicating ferocity nor anger, it is savage beyond measure; and is one of the most terrible scourges experienced by the human race in the countries where it is found. It lurks among the bushes on the sides of rivers, and bounds from its ambuscade, on whatever animal comes within its reach, with an agility not to be conceived, and at a distance almost incredible. If it miss its object, it instantly retires abashed; but, when successful, carries off the largest animal with almost as much apparent facility as a cat would carry off a mouse.

A species of cruelty has been remarked in the character of the tiger, unknown to the generous lion; as well as a kind of cowardice, when under the impulse of surprise, or when frustrated in its aim. We are informed on good authority, that, about the beginning of this century, a party of ladies and gentlemen, on the banks of a river in Bengal, observed, under the shade of some trees, a tiger in the act of preparing for its fatal spring. In this very critical dilemma, one of the ladies, with astonishing



presence of mind, seized an umbrella, and unfurled it full in the animal's face, whereupon he instantly retreated, and thus gave the company an opportunity of withdrawing from the presence of such a dreadful and unexpected neighbour.

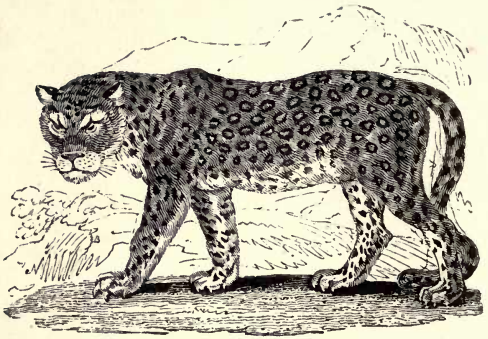
It is related that on the 22nd of December, 1792, Mr. Munro, K. B., and three other gentlemen, went on shore on Saugur Island, in the East Indies, to shoot deer. They saw several tracks of tigers, nevertheless they incautiously continued their sport for several hours; after which they sat down on the edge of a jungle to refresh themselves; first, taking the usual precaution to light a large fire round them, and to fire several pieces in the air, in order to disturb any savage beast that might be lurking in their neighbourhood. They had but just commenced their repast, when some of their attendants brought word that a fine deer had approached within six yards of them. The gentlemen instantly seized their guns, when a roar was heard like thunder, and an immense royal tiger sprang on the unfortunate Munro, and bore him through bushes and every obstacle without an apparent effort; every thing yielded to his prodigious strength. In this horrid situation, his companions fired at the savage, and as it appeared not without effect; for in a few minutes, Mr. Munro joined them, all over blood; and, after staggering some paces, fell. They immediately procured medical assistance, but the unhappy victim had his skull so fractured by the teeth of the monster, and his neck and shoulders were so torn by its claws, that he survived but a short time afterwards. The human mind can scarcely picture to itself a more frightful scene than the above.

This tiger, it seems, was about four feet and a half high, and nine feet long; his head appeared as large as that of an ox, his eyes darted fire; and his roar, when he made the fatal spring, was tremendous beyond description. Fierce and powerful as this animal is, hunting him is a favourite diversion with some of the Eastern princes. His skin is reckoned of great value; and all over the East, and particularly in China, it is usual for the seats of justice to be covered with it. The congar, or red tiger of America, is a diminutive animal, when compared with the tiger of the East.

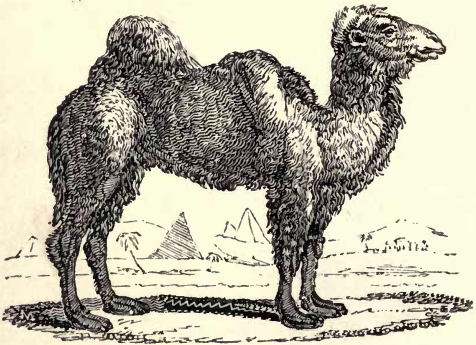
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*Panther.*



*Camel.*

## THE PANTHER.

FROM the near resemblance which the panther, the leopard, the ounce, and the jaguar bear to each other, zoologists have been at a loss to discriminate these animals with precision. The distinctions have sometimes been taken from the size, and sometimes from the colour and the spots. We incline to lay the greatest stress on the latter, as the former appears to be rather an uncertain criterion. The Panther, properly so called, in size, beauty, and ferocity, approaches pretty nearly to the tiger. It is covered with short smooth hair, of a bright tawny colour; the back, sides, and flanks, are elegantly marked with black spots, disposed in circles four or five in each; the chest and belly are white, the former being marked with transverse dusky stripes, and the belly and tail with large irregular black spots. This animal inhabits Africa, in the countries stretching from Barbary to the remote parts of Guinea. Like the tiger, it seizes its prey by surprise, but prefers the flesh of other animals to that of men, whom it seldom devours, unless when pressed by the extremity of hunger.

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## THE PUMA, OR COUGA,

Is about two-thirds the size of the lion, has a small head, is very nimble, and feeds upon deer, sheep, and other animals. In North and South America he is called a lion, in Europe the American lion; but he has little resemblance to that animal, except in colour and voice; being without a mane.

---

## THE CAMEL.

THERE are two varieties of this useful animal, both of which may be considered as essentially serviceable to the natives in the parched deserts of Africa, Arabia, and ther tropical countries. The one, which is called the camel, has two hunches on its back; the other, which obtains the name of the dromedary, has only one, and is

neither so large nor so strong as the former. Both races, however, intermix; and their produce is reckoned more valuable than the pure breed of either. The dromedary, indeed, is by far the more numerous, and extends over spacious regions; while the camel is very scarce, except in Turkey and the Levant. Neither of them can subsist or propagate in the variable climates of the north; and they seem intended by Providence for the service of those countries, in which no other animals are qualified to supersede their utility.

The camel has a small head, short ears, and a long bending neck. Its height to the top of the hunch is about six feet and a half; the colour of the hair on the protuberance is dusky, and that on the other parts is reddish ash. It has a long tail, small hoofs, and flat feet, divided above, but not separated. On the legs are six hard swellings; and, besides the four stomachs which all ruminating quadrupeds possess, it has a fifth, which serves as a reservoir for carrying a supply of water, in the sandy parched deserts which it is obliged to traverse.

The camel is considered by the Arabians as a sacred animal, without whose help the natives could neither subsist, traffic, or travel; its milk makes a part of their nourishment; they feed upon its flesh, particularly when young; they clothe themselves with its hair, which it is seen to shed regularly once a year, and if they fear an invading enemy, their camels serve them in flight, and in a single day, they are known to travel above a hundred miles. Thus, by means of the camel, an Arabian finds safety in his deserts; all the armies upon earth might be lost in the pursuit of a flying squadron of this country, mounted upon their camels, and taking refuge in solitudes, where nothing interposes to stop their flight, or to force them to await their invader. Nothing can be more dreary than the aspect of these sandy plains, that seem entirely forsaken of life and vegetation: wherever the eye turns, nothing is presented but a sterile and dusty soil, sometimes torn up by the winds, and moving in great waves along, which, when viewed from an eminence, resemble less the earth than the ocean; here and there a few shrubs appear, that only teach us to wish for the grove, that reminds us of the shade in these sultry climates, without affording its refreshment; the return of morning, which in other places, carries an idea of cheerfulness, here serves only to enlighten the endless and dreary waste, and to

present the traveller with an unfinished prospect of his forlorn situation; yet in this chasm of nature, by the help of the camel, the Arabian finds safety and subsistence. There are here and there found spots of verdure which though remote from each other, are, in a manner brought nearer by the labour and industry of the camel.

Every part of this animal is applied to some useful purpose; but its chief utility consists in its being a beast of burden, in countries where no other quadruped could live and perform that office. By means of this useful creature, the trade of Turkey, Persia, Arabia, Barbary, and Egypt, is principally carried on. It is not only qualified to carry heavy burdens, but to support extreme abstinence; at the same time that it travels with great expedition. In a word, it is the most tractable and most valuable animal to be found in all the warm regions of the old continent. It is easily instructed in the methods of taking up and supporting his burthen; their legs, a few days after they are produced, are bent under their belly: they are in this manner loaded, and taught to rise; their burthen is every day then increased, by insensible degrees, till the animal is capable of supporting a weight adequate to its force: the same care is taken in making them patient of hunger and thirst: while other animals receive their food at stated times, the camel is restrained for days together, and these intervals of famine are increased, in proportion as the animal seems capable of sustaining them. By this method of education they live five or six days without food or water; and their stomach is formed most admirably by nature to fit them for long abstinence: besides the four stomachs, which all animals have that chew the cud, (and the camel is of the number) it has a fifth stomach, which serves as a vessel, to hold a greater quantity of water than the animal has an immediate occasion for. It is of a sufficient capacity to contain a large quantity of water, where the fluid remains without corrupting, or without being adulterated by the other aliments; when the camel finds itself pressed with thirst, it has here an easy resource for quenching it; it throws up a quantity of this water by a simple contraction of the muscles, into the other stomachs, and this serves to soften its dry and simple food; in this manner, as it drinks but seldom, it takes in a large quantity at a time; and travellers, when straitened for water, have been often known to kill their camels for that which they expected to find within them.

## THE LEOPARD.

THE principal difference between the leopard and the panther, which have frequently been confounded by naturalists, are the following :—The large panther is sometimes six feet long, the leopard seldom more than four. The former is marked in different places with five or six spots, forming a kind of circle, with a large one in the centre ; the latter has a more beautiful coat, the spots are smaller, and disposed in clusters on a bright yellow ground.

The leopard, in its chase of prey, spares neither man nor beast. When it cannot obtain a sufficient supply in its native solitudes, it descends from the internal parts of Africa, and makes terrible devastations among the numerous herds that cover the rich meadows of Lower Guinea. It is also a native of several parts of India, China, and Arabia ; where it is hunted for its flesh, as well as its skin.

The negroes take these animals in pitfalls, slightly covered at the top, and baited with flesh. Their chief inducement for pursuing them is their flesh, which they eat, and consider as a great delicacy. The negresses make collars of their teeth, and wear them as charms.

The manner of taking its prey is similiar to that of the tiger : it begins by creeping along, with its belly close to the ground, concealing itself till it gets an advantageous situation, when it makes a rapid and irresistible spring upon the unfortunate object of its attack.

The *Hunting Leopard* is about the height of a large greyhound, of a light tawny brown colour, and marked with numerous circular black spots. The legs and tail are long ; its form altogether is more lengthened than the tiger's, and the chest narrower. It is a native of India.

This animal is frequently tamed, and used in the chase of antelopes. It is carried in a kind of small waggon, chained and hooded, lest, on approaching the herd, it should be too precipitate, or not make choice of a proper animal. When first unchained, it does not immediately spring towards its prey, but winds with real caution along the ground, stopping at intervals, and carefully concealing itself, till a favourable opportunity offers ; it then darts on the herd with astonishing swiftness, and overtakes them by the rapidity of its bounds. If, however, in its first attempt, which consists of five or six amazing leaps, it does not succeed, it loses its breath, and, finding itself unequal in speed, stands still for awhile to recover ; then, giving up the point for that time, it always returns to its keeper.

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*Leopard.*



*Dromedary.*







## THE DROMEDARY

Is common in Arabia, and all the northern parts of Africa, from the Mediterranean Sea to the River Niger, and is infinitely more numerous, and more generally diffused than the camel: it is also much swifter, and is therefore chiefly employed in business which requires dispatch.

In Arabia, they are trained for running matches, and in many places for carrying couriers, who can go above a hundred miles a day on them, and that for nine or ten days together, over burning and uninhabited deserts. They require neither whip nor spur to quicken their pace, but go freely, if gently treated; and are much enlivened by singing or the sound of the pipe, which gives them spirits to pursue their journey.

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## THE LAMA.

THE Lama resembles the camel in the form of its body, but is without the dorsal hunch: its head is small and well shaped; its neck long, and very protuberant near the junction with the body: in its domestic state, its hair is short and smooth; when wild, it is coarse and long, of a yellowish colour; a black line runs along the top of the back, from the head to the tail. The tame ones vary in colour—white, grey, and russet, dispersed in spots. Its tail is short; its ears are four inches long; its feet are cloven, like those of the ox, and are armed behind with a spur, by which the animal is enabled to support itself on rugged and difficult ground. The height of the Lama is about four feet; and its length, from the neck to the tail, six feet.

They lie down to be loaded, and when weary, no blows can excite them to quicken their pace. They neither defend themselves with their feet nor their teeth. When angry, they have no other method of revenging injuries, but by spitting. They can throw out their saliva to the distance of ten paces; and if it fall on the skin it raises an itching, accompanied with a slight inflammation. Their flesh is eaten, and said to be as good as mutton.

These animals are not found in the ancient continent, but entirely belong to the new; nor are they found spread

all over America, but are found chiefly upon those mountains that stretch from new Spain to the Straits of Magellan. They inhabit the highest regions of the globe, and seem to require purer air than animals of a lower situation are found to enjoy. Peru seems to be the place where they are found in greatest plenty. In Mexico, they are introduced rather as curiosities than beasts of burden: but in Potosi, and other provinces of Peru, they make the chief riches of the Indians and Spaniards who rear them: their flesh is excellent food; their hair, or rather wool, may be spun into beautiful clothing, and they are capable of carrying burthens not exceeding a hundred weight, with the greatest safety. It is true, indeed, that they go but slowly, and seldom above fifteen miles a day; their tread is heavy, but sure, they descend precipices, and find footing among the most craggy rocks, where even men can scarcely accompany them; they are, however, but feeble creatures, and after four or five days' labour, they are obliged to repose for a day or two. They are chiefly used in carrying the riches of the mines of Potosi, and we are told that there are above three hundred thousand of these animals in actual employ.

Though the Lama is no way comparable to the camel either for size, strength, or perseverance, yet the Americans find a substitute in it, with which they seem perfectly contented. It appears formed for that indolent race of masters, which it is obliged to serve; it requires no care, nor expense in the attending or providing for its sustenance; it is supplied with a warm covering, and therefore, does not require to be housed; satisfied with vegetables and grass, it wants no corn to subsist it; it is not less moderate in what it drinks, and exceeds even the camel in temperance. Indeed, of all other creatures, it seems to require water least, as it is supplied by nature with saliva in such large quantities, that it spits it out on every occasion: this saliva seems to be the only offensive weapon that the harmless creature has to testify its resentment. When overloaded, or fatigued, and driven on by all the torturing acts of its keeper, it falls on its belly, and pours out against him a quantity of this fluid; which, though probably no way hurtful, the Indians are much afraid of. They say, that wherever it falls, it is of such an acrimonious nature, that it will either burn the skin, or cause very dangerous eruptions.

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## THE JAGUAR.

MANY different authors, who have written on the subject of the new world, make mention of this animal in their descriptions; by some it is called a tiger, by others a leopard, while in South America it is commonly known by the appellation of the Puma. It is certainly the most formidable animal that has been yet found in the western hemisphere, and lives solely on prey: but, when compared with the tiger for strength and resolution, its powers appear very much inferior.

The Jaguar is of a bright tawny colour. The top of the back is marked with long black stripes, and the sides are impressed with irregular oblong spots, open in the middle, which is the ground colour of the hair. The thighs and legs are marked with full black spots, and the belly and breast are whitish.

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## THE OUNCE.

THOUGH the Ounce is frequently confounded with the panther, it seldom exceeds three feet and a half in length; but its hair is longer, and its tail still more so in proportion. In colour it inclines to a cream, but is rather whiter on the belly than towards the back. Its spots, however, are disposed in a manner not unlike those of the panther, except that they seem to run in stripes on the haunches.

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## THE LYNX.

THE common Lynx (for there are several species) has a short tail, black at the end, and long full hair under the chin. The fur on the body is long and soft, of acinereous colour, tinged with red, and marked with dusky spots, or less distinct in different subjects. The belly is whitish, and the ears are erect, and tufted with long black hair: this last character is common to all the varieties.

The length of the body is upwards of four feet; the tail measures only six inches.

This animal is found in Germany, in all the northern regions of both continents, and in several of the warm climates. It appears, however, to prefer cold to temperate countries, and generally varies in each.

## THE BABOON

Differs from animals of the Ape kind, not only in external appearance, but also in temper and disposition. Fierce, untractable, and vicious, its disposition seems to partake of the hideous and disgusting deformities of its outward figure. Its body is thick, compact, and nervous, and its strength prodigious. Neither art nor caresses can render it in any degree docile or obedient. It seems to be continually fretting with rage, and seeking every opportunity of showing its savage propensities.

It is about four feet high when standing on its hind legs; its head is large, shoulders of an amazing height and thickness, its muzzle long and thick, eyes small and deep sunk, its canine teeth large and formidable, and pouches in its cheeks: the hair on its head is long; the hair on its body is uniformly of a light reddish brown; the tail short, and darker at the end, buttocks red and naked.

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## THE DOG-FACED BABOON

Is about five feet high, and very strong. The coffee planters are obliged to watch very closely to prevent the depredations of these animals, which attack them in troops.

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## THE URSINE BABOONS

Inhabit the mountains of South Africa, and only descend into the plains to plunder the gardens that lie at their foot; during this operation they place sentinels to prevent surprize, and then attack the fruit, which they break in pieces and stow away in their pouches: the sentinel, if alarmed, utters a loud and long continued yell, upon which the whole troop decamps with the utmost expedition, leaving behind them the parings of the bulbous roots which they have dug up. They are of a dusky colour, bearing some resemblance to a young bear.

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## THE EGRET MONKEY,

In spite of its deformed and ferocious appearance, is



*Baboon.*



*Hippopotamus.*





very docile and tameable. It abounds in South Africa, India, and Java, and often assembles at night in great troops to plunder the fields of millet. The monkies, having taken in their mouths as many stalks as they can hold, place others under their arms and in their hands ; thus laden, they return to their habitations. They are so select in their plunder, that they do more mischief by the quantity they throw aside, than by what they carry away.

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### THE PREACHER MONKEY

Is remarkable for the loudness of its voice, which is caused by a bony process in the throat ; the noise resembles the sound of a drum, and may be heard at a great distance : a single monkey sets up a howl, and is joined at intervals by the others in full chorus. They are active and impatient of captivity. The general food of the monkey tribe is fruit and vegetables, but they will also eat shell-fish. They live in trees, and are remarkable for their agility, in the exercise of which they seem to delight.

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### MACAUCO (LEMUR).

The lemurs resemble the monkeys in their hand-like paws ; the hind legs are longer ; their heads are like those of the fox ; their manners are gentle.

There are several species in this tribe, amongst which we may remark the Slow Lemur, which is about the size of a small cat, of a pale brown or mouse colour. The face is flattish and somewhat sharpened, the eyes are prominent, and surrounded with a circle of dark brown, which colour forms a stripe down the back. This animal is found in the island of Ceylon, and other parts of the East Indies. In a state of captivity it evinces a docile and affectionate, though irritable, disposition. It sleeps during the day, and is very slow in its movements. Its usual food is fruit, but it is fond of grasshoppers, in the pursuit of which it appears to forget its wonted indolence. It is remarkably cleanly, and licks its rich fur in the manner of a cat.

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## THE HIPPOPOTAMUS, OR RIVER HORSE.

THIS is a large and formidable animal, in magnitude only inferior to the elephant. A full grown male will measure seventeen feet in length, from the extremity of the snout to the insertion of the tail; seven feet in height, and fifteen in circumference. The head is enormously large, and the jaws extend upward of two feet. The body is of a lightish colour, thinly covered with hair, which at first sight is scarcely perceptible. Though amphibious, the hoofs, which are cloven into four, are unconnected by membranes; and the whole figure exhibits something like a mixture between an ox and a hog. Indeed its voice too bears some mingled resemblance to the bellowing of the one, and the grunting of the other.

This quadruped, thought to be the benemoth of holy writ, chiefly resides at the bottoms of the great rivers and lakes of Africa, from the Niger to the Cape of Good Hope. It is also found in Upper Egypt, and in the lakes and fens of Ethiopia. Fond of ease, it seldom exerts its might, except when prompted by the calls of hunger, or in its own defence. In vain do the natives attempt to repel its inroads; its skin is so thick and strong, as to be impenetrable at the stroke of the sabre, though it yields to a musket ball; and, if it feel itself on slightly wounded, its fury against the assailants is terrible. It generally, however, takes to the water on the first appearance of real danger; and here, in its native element, it manifests all its strength and resolution. "I have seen," said a certain voyager, "one of those animals open its jaws; and, seizing a boat between his teeth, at once bite and sink it to the bottom. I have seen it, on another occasion, place itself under one of our boats, and rising, upset the vessel with six men in it." Such is the great strength of this animal, and from hence, probably, the imagination has been willing to match it in combat against others more fierce and equally formidable. The crocodile and shark have been said to engage with it, and yield an easy victory; but as the shark is only found at sea, and the hippopotamus never ventures beyond the mouth of fresh-water rivers, it is most probable that these engagements never occurred; it sometimes happens, indeed, that the princes of Africa amuse themselves with combats, on their fresh-water lakes, between this and other formidable animals: but whether



the rhinoceros or the crocodile are of this number, we have not been particularly informed. If this animal be attacked on land, and find itself incapable of vengeance from the swiftness of its enemy, it immediately returns to the river, where it plunges in head foremost, and after a short time rises to the surface, loudly bellowing, either to invite or intimidate the enemy; but though the Negroes will venture to attack the shark, or the crocodile, in their natural element, and there destroy them, they are too well apprised of the force of the hippopotamus to engage it; this animal, therefore, continues the uncontrolled master of the river, and all others fly from its approach or become an easy prey.

Dr. Sparrman gives the following account of a rencounter he had with a hippopotamus, one night that he had formed a party to intercept it in its way to the higher grounds:—"We set ourselves down close by each other's side, in a path made by the animals of this kind, making ourselves pretty sure, as the place was flat, of being able, in case any hippopotamus should happen to approach, of being able to kill it with a volley of three shot. But, to the great endangering of our lives, we on a sudden found the animal much quicker in its motions, as well as bolder than we had thought it; for while I was sitting half asleep a river horse came out of the river, rushing upon us with a hideous cry, and as swift as an arrow out of a bow, at the same time I heard the farmer call out to warn me of its approach; luckily, at the very instant, he discharged his piece, which, flashing full in the animal's face, contributed, perhaps, more than the ball, to make it start back, when, setting up another cry, it threw itself into the water again with as great precipitation as it came out."

As the hippopotamus lives upon fish and vegetables, so it is probable, the flesh of land animals may be equally grateful: the natives of Africa assert, that it has often been found to devour children, and other creatures that it was able to surprise upon land; yet as it moves but slowly, almost every creature, endured with a common share of swiftness, is able to escape it; and this animal, therefore, seldom ventures from the river side, but when pressed by the necessities of hunger, or of bringing forth its young.

In order to catch these animals, the natives dig large holes in the ground along the banks of rivers; in the bottom of these pits they place pieces of wood sharpened at the points, and then cover the cavity with branches of trees and turf. When the river horses come out of the river

in the night to graze, they often fall into these snares, and very frequently receive wounds which cause their death. The hunters, however, must be very careful in covering the pits, as the animal will not readily go except where there are prints of the feet of its own kind—on this account, the natives always keep a foot to mark the sand which covers the pit.

The female always comes upon land to bring forth, and it is supposed that she seldom produces above one at a time; upon this occasion, these animals are particularly timorous, and dread the approach of a land enemy; the instant the parent hears the slightest noise, it dashes into the stream, and the young one is seen to follow with equal alacrity.

The young ones are said to be excellent eating; but the Negroes, to whom nothing that has life comes amiss, find an equal delicacy in the old. Dr. Pocock has seen their flesh sold in the shambles, like beef; and it is said, that their breast, in particular, is as delicate eating as veal. As for the rest, these animals are found in great numbers, and as they can produce very fast, their flesh might supply the countries where they are found, could those barbarous regions produce more expert huntsmen.

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## THE TAPIER.

THIS animal bears a strong resemblance to the hippopotamus—though it is much smaller. The nose of the male is lengthened into a kind of proboscis. It is found in numbers from the Isthmus of Darien to the river Amazons.

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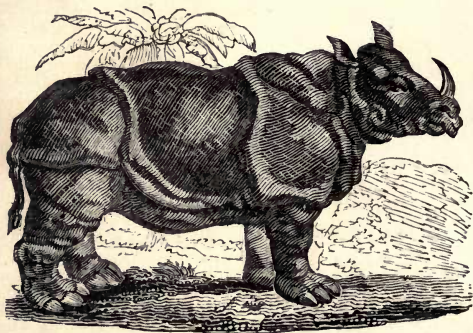
## THE BLACK BEAR OF AMERICA.

THIS is a strong and powerful animal, covered with black, smooth, glossy hair, and is very common in North America. It is said to subsist wholly on vegetable food; but some of them which have been imported into England, have shown a predeliction for flesh. They strike with their fore feet like a cat, seldom use their tusks, but hug their assailants in their paws so closely to their breast, that they almost squeeze them to death. The females





*Brown Bear.*



*Rhinoceros.*

seek impenetrable retreats in which to bring forth their young ; and, though numbers of bears are annually killed during winter, they are generally found to be males.— After becoming pretty fat in autumn, these animals retire to their dens, and continue six or seven weeks in total inactivity and abstinence from food.

The flesh of the young Bear is reckoned a great delicacy, and the paws of an old one are esteemed an exquisite morsel. The fat is white, and very sweet ; and the oil is said to be of great use in softening swellings proceeding from sprains.

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## THE BROWN BEAR

Is a savage and solitary animal, lives in desert and unfrequented places, and chooses its den in the most dangerous and inaccessible precipices of unfrequented mountains. It retires alone to its den about the end of autumn, (at which time it is exceedingly fat) and lives for several weeks in a state of total inactivity and abstinence from food.

In the spring, the old Bears, attended by their young, come out from their retreats, lean, and almost famished by their long confinement. They then ransack every quarter in search of food. They frequently climb trees, and devour the fruit in great quantities, particularly the date-plum tree, of which they are exceedingly fond. They ascend these trees with surprising agility, keep themselves firm on the branches with the hinder paws, and with the other collect the fruit.

The bear is remarkably fond of honey, which it will encounter great difficulties to obtain, and seek for with great cunning and avidity.

It enjoys, in a superior degree, the senses of hearing, smelling, and touching.— Its ears are short and rounded ; and its eyes small, but lively and penetrating, and defended by a nictating membrane : from the peculiar formation of the internal parts of its nose its sense of smelling is exceedingly exquisite : the legs and thighs are strong and muscular : it has five toes on each foot, and uses its fore feet as hands, although the toes are not separated as in most animals that do so : the largest finger is on the outside.

The voice of the Bear is a deep and surly kind of growl, which it frequently exerts without the least cause. It is

very easily irritated, and at that time its resentment is furious, and often capriciously exerted.

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### THE WHITE, OR GREAT POLAR BEAR.

THIS species has a peculiar long head and neck, and its limbs are of prodigious size and strength. Its body frequently measures thirteen feet in length, and it is the only animal that arrives at a superior magnitude in the arctic regions, where it seems to reign without a rival.

The white bear lives on fish, seals, and the dead bodies of whales, or even on the corpses of men, which it disinters. Sometimes it will attack a party of armed men, and even board small vessels. The mutual affection that subsists between the female and her young, has been frequently exemplified in the most affecting trials: they will rather die than desert each other.

When our mariners land upon the shores of Greenland, in such parts as have not been frequented before, the white bears come down to view them with an awkward curiosity; they approach slowly, seeming undetermined whether to advance or retreat, and being naturally a timorous animal, they are only urged on by the conscious experience of their former victories; however, when they are shot at, or wounded, they endeavour to fly, or finding that impracticable, they make a fierce and desperate resistance till they die.

It often happens, that when a Greenlander and his wife are paddling out at sea, by coming too near an ice float, a white bear unexpectedly jumps into their boat, and if he does not overset it, sits calmly where he first came down, and like a passenger suffers himself to be rowed along. It is probable the poor little Greenlander is not very fond of his new guest, however he makes a virtue of necessity, and hospitably rows him to shore.

During summer they take up their residence on large islands of ice. When these pieces of ice are detached by strong winds or currents, the bears allow themselves to be carried with them, and often perish in the open sea. Those which arrive on these fragments of ice upon the coasts of Iceland or Norway are almost famished, from the length of their voyage, and are of course extremely voracious. The flesh of this creature is white, and is said to taste like mutton. The fat is melted for train-oil; and that of the feet is used in medicine.

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## THE RHINOCEROS.

OF this animal there are two varieties, one with a single, the other with two horns on its snout. Next to the elephant, it is the most powerful of quadrupeds, and the most bulky if we except the hippopotamus. Its length is commonly twelve feet, its height six or seven, and its circumference is nearly equal to its length.

Except in strength, however, nature has not endowed the Rhinoceros with any qualities that exalt it above the ordinary rank of quadrupeds; its principal resources consist in its moveable lip, and the offensive weapon on its nose, which is peculiar to the kind. This is indeed a very formidable instrument of annoyance or defence: it is solid throughout, and situated so advantageously, that it protects the whole visage, and enables the animal to assail its foes with irresistible effect. It frequently rips open the belly of its antagonist, and is dreaded by the tiger more than the elephant itself.

The body and limbs are covered with a blackish skin, so impenetrable as to resist the claws of the most ferocious animals, as well as the spear, and the shot of the hunters. Being incapable of either extension or contraction, it is rolled up in large folds at the neck, the shoulders, and the rump, in order to facilitate the motion of the head and limbs; which last are massy and furnished with large feet, armed with three toes.

Without being ferocious or carnivorous, the Rhinoceros is perfectly untractable. He is merely among large, what the common hog is among small animals; rash, violent, and brutal, without intelligence, sentiment, or docility; he seems even to be subject to paroxysms of fury, which nothing can mitigate, for one that Emanuel, king of Portugal, sent to the Pope in 1513, destroyed the vessel in which it was transported; and a Rhinoceros, exhibited some years in Paris, was drowned in a similar manner, while on the voyage to Italy.

The rhinoceros, which was shewn at London in 1739, and described by Doctor Parsons, had been sent from Bengal. Though it was very young, not being above two years old, yet the charge of his carriage and food from India, cost nearly a thousand pounds. It was fed with rice, sugar and hay: it was daily supplied with seven pounds of rice, mixed with three of sugar, divided into three por-



tions ; it was given great quantities of hay, and grass, which it chiefly prefers ; its drink was water, which it took in great quantities. It was of gentle disposition, and permitted itself to be touched and handled by all visitors, never attempting mischief, except when abused, or when hungry ; in such a case, there was no method of appeasing its fury, but by giving it something to eat. When angry it would jump up against the walls of its room, with great violence ; it made many efforts to escape, but seldom attempted to attack its keeper, and was always submissive to his threats. It had a peculiar cry, somewhat a mixture between the grunting of a hog, and the bellowing of a calf.

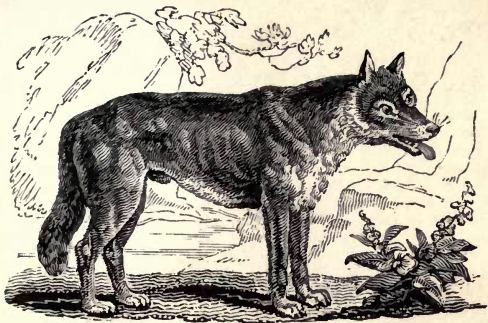
The age of these animals is not well known : it is said, by some, that they bring forth at three years old ; and, if we may reason from analogy, it is probable they seldom live above twenty.

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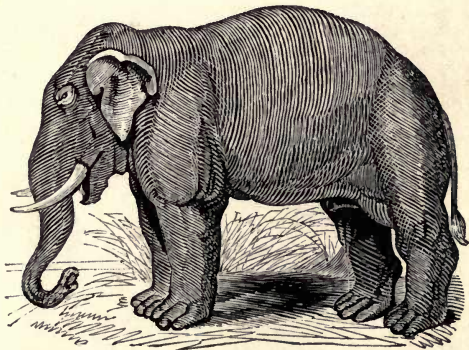
## THE WOLF.

THIS animal is nearly allied to the canine family, and indeed, in a few instances, has been known to intermix with it, and to produce a spurious breed. The wolf has a long head, a pointed nose, sharp erect ears, a long bushy tail, long legs, and longish hair ; he has formidable teeth, and is taller than any greyhound ; the colour is generally a pale brown, tinged with yellow, though it is sometimes found white, and in Canada, black. The eyes slant upwards, and are of a fiery green ; and the whole visage is ferocious, forming a just index of the disposition.

The Wolf is, in reality, one of those animals whose carnivorous appetite is the most vehement, and whose means of satisfying it are the most various. Nature has furnished him with strength, cunning, and agility, and all the requisites necessary for pursuit or conquest ; yet, with all those advantages, it is his fate frequently to die of hunger. Proscribed by man, he is compelled to seek the most sequestered retreats, and it is only when he is impelled by the most pressing hunger, that he ventures to make incursions near the villages and towns. His depredations, however, are terrible, whenever his raging appetites get the better of his fear ; on these occasions, he tears, and destroys with wanton barbarity ; and neither men nor animals are secure from his attacks.



*Wolf.*



*Elephant*



Edgar King of England is said to be the first who attempted to rid his kingdom of such disagreeable inmates, by changing the punishment for certain crimes, into the acceptance of a number of wolf's tongues from each criminal. They are said to have infested Ireland long after they were extirpated in England; and great care was bestowed in training up a very large breed of dogs, called the Irish wolf-dog, for the purpose of hunting them down. Wolves existed in the great woods of Shillela, until about the year 1700, when the last of them was destroyed in the neighbourhood of Glendaloch; however, the oldest men in the country remember nothing of these animals; and it is probable that there have been none here for more than a century past. Scotland also is totally free from them.

Scarcely any thing belonging to the wolf is good, except his skin. Of this, the furriers make a covering that is warm and durable, though coarse and unsightly. His flesh is very indifferent and seems to be disliked by all other animals, no other creature being known to eat the wolf's flesh except the wolf himself. He breathes a most foetid vapour from his jaws, as his food is indiscriminate, often putrid, and seldom cleanly. In short, every way offensive, a savage aspect, a frightful howl, an insupportable odour, a perverse disposition, fierce habits, he is hateful while living, and useless when dead.

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## THE ELEPHANT.

Of all the creatures that have hitherto been taken into the service of man, the Elephant is pre-eminent in the size and strength of his body, and inferior to none in sagacity and obedience.

All historians agree, that next to man the Elephant is the most sagacious of all animals; yet were we to judge from its external appearance only, we should form no very high opinion of its faculties. Its large body, covered with a callous hide, destitute of hair; its large unshapen legs, which scarcely seem formed for motion; its small eyes, its large pendulous ears, and its long trunk, all conspire to give it an air of more than common stupidity; but, when we advert to its well-known qualities, our misconceptions are rectified; when we contemplate the various

disadvantages which it can surmount, disadvantages arising from its clumsy conformation, our surprise and admiration increase.

Though not only the largest, but the strongest of all quadrupeds, in a state of nature it is neither fierce nor mischievous. Pacific, mild, and brave, it only exerts its powers in its own defence or that of the community to which it belongs. It is social and friendly with its kind; the veteran of the troop always appears as the leader, and the next in seniority brings up the rear. As they march, the forest seems to sink beneath them, in their passage they bear down the branches of trees, on which they feed; and, if they enter cultivated fields, the labours of agriculture soon disappear. Such invasions are the more terrible, as they cannot be repelled; for an army of men would scarcely be equal to the attack of their united numbers. Sometimes, however, a straggler or two are assailed by the hunters; and even in this case, it is necessary to employ stratagem against them as well as the force of arms; for, should the hunter miss his aim, and fail to secure a timely retreat, the enraged animal presently discovers its assailant, rushes on him, strikes him with his tusks, seizes him with his trunk, tosses him in the air, and watching his fall tramples him to death. Many fatal instances of this kind are recorded by travellers,—and a very striking one may be found in Van Reenen's Journal of an expedition in quest of the unfortunate crew of the Grosvenor East-Indiaman.

In their natural state, Elephants delight in frequenting the banks of rivers, and moist situations, environed with the deepest woods. They always disturb the water before drinking, and often fill their trunks with this element, which they spout out in the manner of a fountain, for amusement or revenge.

In the city of Delhi, as an Elephant was passing along the streets, it put its trunk into a tailor's shop, where one of the men at work pricked it with a needle, pleasing himself and his comrades with the frolic. The animal disguised its resentment, but, proceeding to a dirty puddle, filled its trunk, and, returning to the spot, spouted the contents on the offending tailors: and thus amply revenged the insult it had received.

In Africa, Elephants, perhaps, are the most numerous, but in Asia they are the largest and most useful to man. In India particularly, they are inured, by regular and

persevering labour, to the purposes of peace and war, and sold at a price proportioned to their size, and sometimes to their colour: a white one they hold in the highest estimation, and in some places adore it as a divinity.

When the Elephant is once tamed, it is the most gentle and obedient of all animals. Its attachment to its keeper is remarkable, and it seems to live but to serve and obey him. It is quickly taught to kneel in order to receive its rider; caresses those with whom it is acquainted; and uses its trunk as a hand to assist in taking up a part of its load.

The conductor of the Elephant, who is usually mounted on its neck, impels it with an iron rod; but in general a word is sufficient to put it into motion, when once acquainted with its leader; and indeed it will seldom obey a stranger. There are instances, however, of its having on a sudden frenzy, from supposed ill treatment, killed its keeper: when its compunction has afterwards appeared to be extreme.

An Elephant, which had been trained to draw the cannon of the French forces in India, being taught to expect a certain reward from its conductor for the performance of an arduous piece of service, which it executed, and, being disappointed of its expectations, was so enraged, that it slew him. His wife, who had been a spectator of the horrid scene, instigated by madness or despair, immediately threw her two little sons at the creature's feet, crying out, that since it had killed her husband, it might also destroy her infants. The generous animal, recovering from its transport of passion, made a sudden pause; and, lifting up the eldest with its trunk, placed him on its back, and ever after obeyed him with the most scrupulous punctuality.

Before the destructive use of fire-arms was known, the princes of the East placed their chief dependence in war on the number and discipline of their elephants; but now they chiefly use them for parade, or as beasts of burden. No animal in nature can be better adapted for the latter purpose; it is capable of drawing with facility what six horses could scarcely move: it can support three or four thousand pounds weight on its back, and one thousand on its trunk alone; when pushed on, it can travel nearly one hundred miles a day, and without violent effort, fifty or sixty.

In India, elephants are also made the ministers of penal justice. They are taught to execute criminals,



whom they either crush with their trunks, or impale on their tusks; but in those barbarous offices they are not voluntary assistants, they only act by command, and do violence to their natural disposition, when they are cruel without personal provocation.

This animal's sense of smelling is truly exquisite; nor is it less remarkable for its sense of hearing. Its ears are extremely large, and greater in proportion than even those of an ass; they usually hang down, but it can readily raise and move them; they serve also to wipe its eyes, and to protect them against the dust and flies, that might otherwise incommode them. It appears delighted with music, and very readily learns to beat time, to move in measure, and even to join its voice to the sound of the drum and the trumpet.

It is scarcely necessary to mention that the teeth of this animal are of great value, and that they furnish ivory. For the sake of this article alone, elephants are frequently killed; and the hunter, who is fortunate enough to come in for such a prize, thinks himself amply recompensed for his danger and trouble in the chase.

The Elephant is said to live upwards of a hundred years. To his longevity, and other prominent qualities, the poet, Thomson, alludes in the following animated lines:

Peaceful, beneath primeval trees, that cast  
Their ample shade o'er Niger's yellow stream,  
And where the Ganges rolls his sacred wave;  
Or mid the central depth of blackening woods,  
High raised in solemn theatre around,  
Leans the huge ELEPHANT, wisest of brutes!  
O truly wise! with gentle might endowed,  
Though powerful, not destructive! here he sees  
Revolving ages sweep the changeeful earth,  
And empires rise and fall; regardless he  
Of what the never-resting race of men  
Project: thrice happy! could he 'scape their guile!  
Who mine, from cruel avarice, his steps:  
Or with his towery grandeur swell their state—  
The pride of kings! or else his strength pervert,  
And bid him rage amid the mortal fray,  
Astonished at the madness of mankind.

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*Jackall.*



*Hyæna.*

## THE JACKALL.

THIS animal has obtained the appellation of the lion's provider, merely because it pursues its game by the scent of which the lion avails himself, and joins in the chase. It is about the size of the fox, and seems an intermediate line of separation between the dog and the wolf-kind. Its colour is a bright yellow, whence Linnæus has called it the *canis aureus*.

The Jackall is common in Asia, in Barbary, and other countries of Africa, as far south as the Cape of Good Hope. Packs of forty or fifty will proceed to the chase, uttering a loud noise; and, thus united, they are a match for the boldest inhabitants of the forest; they will face the strongest, and yet satisfy their appetite on the meanest animals. They seem to have no great apprehensions even of man himself, and will pursue their game to his very dwellings.

These animals, being gregarious, always assist each other on their predaceous excursions, whether of the chase or of exhumation; for the dead and the living are equally liable to their attacks. By day, they lurk in separate holes; but at the approach of night, they collect their numbers, and rush out to kill and to destroy.

As Jackalls unite in great troops to hunt down their prey, they drive all the timid animals before them by their hideous yellings. The lion follows after them, and satisfies his appetite with their prey, leaving them only the mangled remains. From this circumstance the Jackall has been popularly termed the lion's provider. When pressed with hunger, it will enter towns, devouring every animal substance it can find, attacking flocks, and occasionally man himself. There is great reason to suppose that this animal is the real stock of the dog. Its propensities and habits are very similar. It is capable of being easily tamed when taken young, and attaches itself to man, distinguishes its master, answers to its name, and shows an attachment to dogs. This latter circumstance is very peculiar, as the wolf and fox, who are thought to resemble the dog so nearly, are at the same time his determined enemies.

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## THE HYÆNA.

THE Hyæna is nearly of the size of a wolf; and has some similitude to that animal in the shape of its head and body. The head, at first sight does not appear to differ, except that the ears of the hyæna are longer, and more without hair; but, upon observing more closely, we shall find the head broader, the nose flatter, and not so pointed. The eyes are not placed obliquely, but more like those of a dog. The legs, particularly the hinder, are longer than those either of the dog or the wolf, and different from all other quadrupeds whatsoever, in having but four toes, as well on the fore feet as on the hinder. Its hair is a dirty gray, marked with black, disposed in waves down its body. Its tail is short, with pretty long hair. Its manner of holding the head seems remarkable; somewhat like a dog, pursuing his scent, with the nose near the ground. The head being held thus low, the back appears elevated, like that of the hog, which, with a long bristly band of hair that runs all along, gives it a good deal the air of that animal.

But no words can give an adequate idea of this animal's figure, deformity, and fierceness. More savage and untameable than any other quadruped, it seems to be for ever in a state of rage or rapacity, for ever growling, except when receiving its food. Its eyes then glisten, the bristles of its back all stand upright, its head hangs low, and yet its teeth appear; all which give it a most frightful aspect, which a dreadful howl tends to heighten. The tone of this cry is very peculiar: its beginning resembles the voice of a man moaning, and its latter part as if he were making a violent effort to vomit. As it is loud and frequent, it might, perhaps have been sometimes mistaken for that of a human voice in distress, and have given rise to the accounts of the ancients, who tell us, that the hyæna makes its moan to attract unwary travellers, and then to destroy them: however this may be, it seems the most untractable, and for its size, the most terrible of all other quadrupeds; nor does its courage fall short of its ferocity; it defends itself against the lion, is a match for the panther, and attacks the ounce, which it seldom fails to conquer.

It is a solitary animal, to be found chiefly in the most desolate and uncultivated parts of very warm countries. It

resides in the caverns of mountains, in the clefts of rocks, or in dens, that it has formed for itself under the earth. Though taken ever so young, it cannot be tamed; it lives by depredation, like the wolf, but is much stronger, and more courageous. It sometimes attacks man, carries off cattle, follows the flock, breaks open the sheep-cots by night, and ravages with insatiable voracity. Its eyes shine by night; and it is asserted, not without great appearance of truth, that it sees better by night than by day. When destitute of other provision, it scrapes up graves, and devours the dead bodies, how putrid soever.

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### THE SPOTTED HYÆNA

Is called, at the Cape of Good Hope, the *Tiger-Wolf*, and is very common in that part of the world. Sparrman describes it as a cruel, mischievous, and formidable animal. Its horrid yells are to be heard every night, whilst it prowls about for its prey, and lurks near farm yards, where cattle are kept. These are well defended by dogs, of which the Hyæna, though larger and stronger, is much afraid; and will not venture an attack, unless pressed by the most urgent necessity: neither will it dare to seize upon any of the larger animals, such as oxen, cows, horses, &c., whilst they make the least appearance of defending themselves, or even if they do not betray any symptom of fear. It sometimes endeavours to disperse the cattle by its hideous roaring; after which it selects and pursues one of them, which it soon disables by a deadly bite, and then deavours.

The general colour is a reddish brown, marked with roundish spots; the hind legs, in some, with transverse black bars,—in others with spots; its head is large and flat; above each eye, as well as on the lips, it has whiskers; a short shagged kind of mane runs along from the middle of the back to its head, the hair pointing forward; its ears are short and round; the hair on its face and upper part of its head is short; the skin on its brow is wrinkled.

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## THE WALRUS, OR SEA HORSE.

The Walrus is found chiefly in the northern seas. Great herds of them are sometimes seen together on the sea shore, or sleeping on an island of ice. When alarmed, they instantly throw themselves into the water with great precipitation. If wounded, they become bold and furious, and unite in the defence of each other: they will attack a boat, and endeavour to sink it by striking their teeth into his sides, at the same time bellowing in the most hideous manner.

The head of the Walrus is round; its lips very broad, and covered with thick transparent bristles; its eyes small and red; instead of ears, it has two small orifices; and above the whiskers, semicircular nostrils, through which it throws out water like the whale, but with much less noise; its skin is thick and wrinkled, and has a thin covering of short brownish hair: its legs are short: it has five toes on each foot, connected by membranes; and on each toe a small nail: the hind feet are very broad, and extended nearly on a line with the body.

It is hunted for its teeth, which are equal to those of the Elephant for durability and whiteness.

An ordinary Walrus is said to yield half a ton of oil, equal in goodness to that of the whale.

In climbing upon the ice, the Walrus makes use of its teeth as hooks to secure its hold, and draw its great unwieldy body after it. It feeds on sea-weeds and shell-fish, which it is said to disengage from the rocks to which they adhere, with its tusks.

The White Bear is its greatest enemy. In the combats between these animals, the Walrus is said to be generally victorious, on account of the desperate wounds it inflicts with its teeth.

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*Giraffe.*



*Wild Cat.*

## THE GIRAFFE, OR CAMEL-LEOPARD,

Notwithstanding its vast size, is timid and harmless, and little adapted for a state of hostility. It flies rather than resists the most insignificant enemy; lives entirely on vegetables, and when grazing is obliged to spread its legs very wide, in order that it may reach the ground. Its motion is a kind of gallop, which, though swift, is ungraceful. The Greeks gave it the name of camelopardalis, from an idea that it was generated between a camel and a leopard. History informs us, that Pompey exhibited no fewer than ten of them on one of the amphitheatres in Rome, at once. It is probable that such a number will never be seen in Europe again at the same time: even one, indeed, is a rarity.

The existence of this animal was for a long time doubted in Europe; the account of its great height and extraordinary form were so incredible in themselves, and often so contradictory, that few persons placed any confidence in them. The most credulous could scarcely believe that any animal was so tall that a man on horseback could ride under it without stooping; yet strange as it may have appeared, the fact is strictly true, or very nearly so. The camelopard inhabits the deserts of Africa, especially towards the south, above the Cape of Good Hope; and though it be not very rare in them, still they are so extensive that we cannot come up with it often. Its form is light, slender and airy, like that of the deer, but without the proportions, and also without the easy motions of the latter. Its head is like that of the deer, with two horns about a foot long, which are a part of the skull or rather an extension of the bone of it. Its neck is like that of the horse, its legs and feet like those of a deer, but the fore-legs are twice as long as the hinder.

As it stands erect it is eighteen feet high from the ground to the top of the head, and ten feet to the tip of the shoulder, leaving eight feet from the shoulders to the head. If its body then were three feet deep, there would be still seven feet under the belly. The hinder part of the body is so low, that when the animal is standing, it has the appearance of a dog sitting; and this form renders all its motions laborious, awkward and tiresome. Hence it retires into remote places, where it is not likely to be pursued and is therefore rarely to be met with. A young one being

brought to the Cape, was accurately measured, and though it had not reached full maturity, was more than seventeen feet high; from the head to the shoulder seven feet, from the shoulder to the tail seven feet, and the hind-legs shorter by two feet than the fore.

It is utterly incapable of defence, except in flight; its horns are blunt, its teeth fitted only for eating vegetables, and its legs it cannot use in kicking, so that it is very timorous, and flies from every enemy. It is not of any service to man. The shortness of its back, and the steep descent from the shoulders to the rump (being three feet in seven) combined with its awkward motion render it unfit for riding, and still more so for carrying burdens; yet it is sought after through curiosity, and has been sent from Africa to Europe, and the remotest parts of Asia; the strangeness of its form, and the beauty of its spotted skin, are too alluring to be resisted. The skin of one has been presented to Trinity College, Dublin, in whose museum it may be seen very well stuffed and preserved.

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## THE MULE.

THIS hardy and useful animal is the offspring of the horse and the ass; and, being uniformly barren, furnishes an indisputable proof that the two species are perfectly distinct.

The common Mule is very healthy, and will live about thirty years. It is found very serviceable in carrying burthens, particularly into mountainous countries, where horses are not so sure footed.

On this account people of the first quality in Spain are drawn by Mules, where fifty or sixty guineas is no uncommon price for one of them. Their manner of going down the Alps, the Andes, &c. is very extraordinary. In these passages, on one side, are steep eminences, and, on the other, frightful abysses; and, as they generally follow the direction of the mountain, the road, instead of lying in a level, forms at every little distance deep declivities of several hundred yards downward. These can only be descended by Mules; and the animals seem fully sensible of the danger, and of the caution that is to be used in such descents. Having perpared for this enterprise, they place their fore feet in a posture, as if they were stopping themselves, and then put their hind feet together, as if

they were going to lie down. In this attitude, having taken a survey of the road, they slide down with the swiftness of a meteor. In the mean time, all the rider has to do is to keep himself fast on the saddle, without checking therein; for the least motion will disorder the equilibrium of the animal, in which case they unavoidably perish. But their address in this rapid descent is truly wonderful; for in their swiftest motion they follow exactly the different windings of the road as if they had previously settled in their minds the route they were to follow, and taken every precaution for their safety. Some of these Mules, after being long used to such journies acquire a kind of reputation for their safety and skill; and their value rises in proportion to their fame.

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### THE WILD CAT.

THE hair of the Wild Cat is soft and fine, of a pale yellow colour, mixed with grey; a dusky list runs along the middle of the back, from head to tail; the sides are streaked with grey pointing from the back downward; the tail is thick and marked with alternate bars of black and white. It is larger and stronger than the tame cat, and its fur much longer.

It inhabits the most mountainous and woody parts of this island, lives in trees, and hunts for birds and small animals, such as rabbits, hares, rats, mice, moles, &c. It frequently makes great havoc among poultry, will even kill young lambs, kids, and fawns, and is the fiercest and most destructive beast of prey in this kingdom.

It is taken either in traps, or by shooting. There is frequently danger in the latter mode; for if it be only slightly wounded, it will attack the person who has injured it, and is not easily repelled.

Wild Cats are found, with very little variety, in almost every climate. They existed in America before its discovery by the Europeans. One of them was brought to Columbus, which was of the ordinary size, of a brownish grey colour, with a long tail. They are common in many places of Asia and Africa. Sparrman gives a description of one which he shot at the Cape, which was in every respect similar to those of this country. It was of a grey colour; and measured, from the nose to the tail, nearly twenty-two inches: the tail was thirteen inches long; its height was about a foot and a half. The intestines were full of moles and rats.

## THE FOX.

THIS animal is so well known, that to describe its figure might appear superfluous; we shall therefore only mention some of its most striking habits and manners. It is a crafty, lively, and falacious creature, and exactly resembles the dog in its internal conformation. It differs, however, from the dog, in emitting a strong offensive smell, and in many of its leading propensities.

The artifices of the Fox have, in all ages, been proverbial. An immoderate regard to self-preservation, seems to be its actuating principle: and it seeks subsistence, rather by fraud and address, than by intrepidity and force. It digs itself an asylum in the earth, and sallies out at the most favourable opportunities, whether to plunder a hen-house, or to seize unawares any unprotected bird or quadruped that falls in its way; nothing, in short, comes amiss to it. When at a loss for other food, it will attack a nest of wasps, or wild bees; and, in spite of their stings, succeed in carrying off the combs.

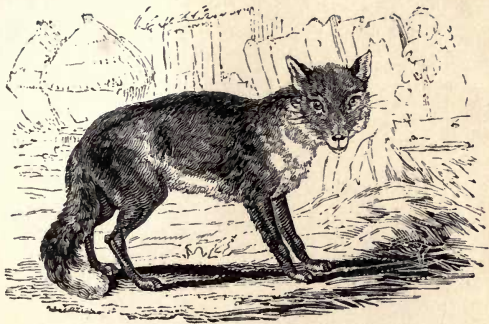
As the fox is inimical to all other animals, so the various tribes of nature seem leagued against him.—The dog hunts him with peculiar acrimony; and even birds seem to take a pleasure in betraying his steps, in exposing him to the hostility of the pack, or announcing his approach to the object of his pursuit.

There are three varieties of Foxes in this island, differing from each other more in form than in colour, which is mostly a tawny red. The Greyhound Fox is the largest, and is chiefly found in the mountainous parts of England and Scotland. The Mastiff Fox is rather less; but his limbs are more strongly formed. The Cur Fox is the least, but most common. He lurks about the out-houses of the farmer, and carries off all the poultry within his reach.

The eye of the Fox is of a lively hazel colour, very significant and expressive. He seems greatly to admire his bushy tail, and frequently amuses himself by catching it as he runs round. In cold weather, when lying down, he folds it about his head.

The Fox sleeps sound; and, like the dog, lies in a round form.

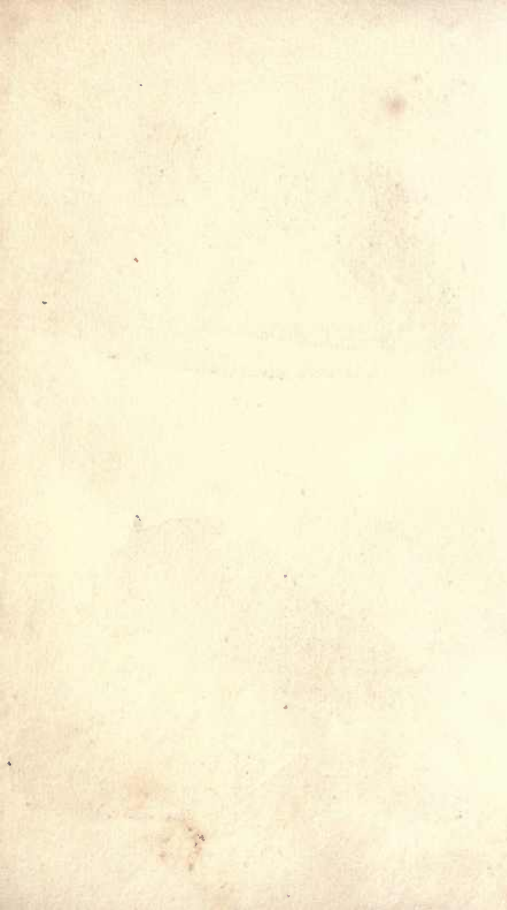
When he is only reposing himself, he stretches out his hind legs, and lies on his belly. In this position he spies



*Fox.*



*Wild Boar.*





the birds as they alight on the hedges or places near him. He rarely lies exposed, but chooses the cover of some thick brake, where he is secure from being disturbed.

The cunning of the Fox in surprising and securing its prey is equally remarkable. When it has acquired more than it can devour, its first care is to secure what it has killed, which is generally all within its reach. It digs holes in different places where it conceals its booty by carefully covering it over with earth. If a flock of poultry have unfortunately fallen victims to its stratagems, it will bring them, one by one, to these hiding places, where it leaves them till hunger demands a fresh supply.

This animal sleeps much during the day ; for the night is the season of its active depredations. The female produces, once a year, from three to six young ones at a time, which grow eighteen months or two years, and live thirteen or fourteen years. They are frequently taken in traps ; but great caution must be used to deceive these wily animals.

The chase of the Fox is a very favorite diversion in this kingdom, and is no where pursued with such ardour and intrepidity. The instant the Fox finds he is pursued, he flies towards his hole ; and finding it stopped, (which is always carefully done before the chase begins) he has recourse to his speed and his cunning for safety. He does not double and measure his ground back like the hare, but continues his course straight forward with great strength and perseverance. As the scent of the Fox is very strong, the dogs follow with great alacrity ; and it is hard to say, whether the eagerness of the hounds, the ardour of the horses, or the enthusiasm of the hunters, is most to be admired. When all his shifts have failed him, and he is at last overtaken, he then defends himself with obstinacy, and fights in a kind of sullen silence till he is torn in pieces by the dogs.

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## THE WILD BOAR,

which may be considered as the parent stock of our domestic swine, is by no means the filthy degraded creature that constantly falls under our view. He is much smaller than the tame hog, but at the same time stronger and undaunted. In his own defence, he will turn on men

or dogs; and scarcely shuns any denizen of the forests, in the haunts where he ranges. His colour is always an iron grey, inclining to black, his snout is longer than that of the common breed, and his ears are comparatively short. His tusks are very formidable, and all his habits are fierce and savage.

Hunting the wild boar is a favourite diversion in Germany, Poland, &c. and his flesh is much esteemed, when properly cured. He is a native of most parts of the world; but the breed has long been extinct in England; though, under William the Norman, the killing of one was punished with loss of eyes.

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### THE ANTELOPE.

The antelopes are a very numerous tribe, inhabiting chiefly those parts of the temperate zones which are nearer to the torrid. They abound in Asia and Africa; two species only are to be found in Europe, and none have hitherto been discovered in America. They are remarkably active and elegant in their form; of a restless and timid disposition; of great vivacity; watchful and rapid in their movements, taking such bounds as astonish the spectators. They will sometimes stop in the midst of their course, gaze on their pursuers, and then continue their flight. The chase of these animals is a favourite amusement of the Eastern nations. The greyhound, the fleetest of dogs, cannot overtake the still fleetier antelope, but the sportsman is obliged to avail himself of the falcon, trained for this purpose, who seizes on the animal, and, by impeding its motions, enables the dogs to obtain their prey. In India and Persia, the hunting leopard is used in the chase of the antelope. Some species of the antelope form herds of several thousands; others associate to the number of five or six. Some inhabit the plains, but most of the species dwell in the mountains. They often browse like the goat on the tender shoots of trees. The flesh is good, and that of the hunted antelopes is particularly savoury.—The Egyptian Antelope is somewhat larger than a deer: it is found about the Cape of Good Hope and in other parts of Africa. The horns are very remarkable, being quite straight, about three feet in length, very slender, tapering towards the point, and

appearing to be twisted very closely : those of the female are smaller. The colours of this animal are elegant, the upper parts being of a pale bluish grey with a tinge of blossom colour : the under parts are white, and separated from the coloured part by a stripe of dark chesnut colour ; there is another similar stripe down the back, and patches of the same colour on the outside of the legs : the head is white and curiously marked with black : the tail is brown with a slight covering of long black hairs. The Africans consider the pasan as a very dangerous animal, and dread the effects of its sharp horns, which, after the manner of its tribe, it pushes against its adversary. Even when wounded, they fear to approach it, waiting at a distance the moment of its death. This species is not gregarious, being seen only in pairs.

The Oreas, or Indian Antelope, is one of the largest of the genus, being very little smaller than a cow : it is of a bluish slate colour, with a bright bay head, a black mane, and black tip to its tail. It is said to be of great strength, and that it might be employed usefully as a domestic animal. The flesh is reckoned very good : the hide makes good strong leather.

The Springer Antelope is a very elegant species, marked like the Pasan, but of pale yellow brown. When approached, it springs away in prodigious bounds. These animals migrate annually from the interior of Africa to the neighbourhood of the Cape, where they remain for two or three months ; they then join companies, going off in troops consisting of many thousands, covering the great plains as they pass through them, and being attended by numbers of lions, tigers, and hyænas, &c. ; they are excellent eating.

The Gnou, or Ox-headed Antelope, is rather larger than a stag ; its horns are singular, being smooth, pointed, growing forwards and then bending upwards ; it is of dull cow-red, with long black hairs on its breast, and, an ash-coloured mane on its back ; in spite of the awkward form of its body, its limbs are light and elegant : it is a fierce and dangerous animal, but its flesh is excellent : it is principally found in the country of the Nimiquas, in southern Africa, where it lives in large herds.

The Chamois is chiefly a European species, which inhabits the Alps of Switzerland and Italy, the Pyrenæan mountains, the island of Crete, and several parts of Greece : it is also found in the mountains of Caucasus and Taurus :

it is about the size of a goat, of a deep-reddish brown, with the under parts of the body of a yellowish white; the horns are about eight inches high, upright, slender, and strongly hooked at the tip; their colour is black. The hair of the Chamois is long; the tail is blackish. The skin of the Chamois is much esteemed for fine leather.

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## THE BARBYROUSSA

Is about the size of a common hog, but of a longer form and more slender limbs; its colour is a dark brown, and it is covered with a fine, short, woolly hair, interspersed with bristles; its upper tusks, instead of being inside the mouth, grow upwards through the skin, and become, with age, so long and curved as to touch the forehead and again curve inwards, thus losing their power of offence; the lower tusks are long and curved, but much smaller than the others. The Barbyroussa is a gregarious animal, found in large herds in many parts of Java, and others of the Indian islands; their food is entirely vegetable: it is said, that when sleeping, or resting in a standing posture, they will hook themselves by their tusks to the lower branches of the trees: they can swim to a great distance: their voice resembles that of the common hog. The inhabitants of the Indian islands sometimes tame the Barbyroussas; they consider them as wholesome food.

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## THE OURANG OUTANG.

The foremost of the Ape kind, the Ourang Outang, or Wild Man of the Woods, is seen of different sizes, from three to seven feet high. In general, however, its nature is less than that of a man; but its strength and agility much greater. Travellers who have seen various kinds of these animals in their native solitudes, give us surprising relations of their force, their swiftness, their address, and their ferocity.

The animal which was described by Dr. Tyson, was brought from Angola in Africa. The body was covered with hair, which was of a coal black colour, more resembling human hair than that of brutes. The face was almost human, but its eyes were deep sunk in the head.



*Orang Outang.*



*Badger.*





When this creature was examined anatomically, so many parts were like those of man in conformation, that it might have excited wonder how they were productive of such few advantages. The tongue, and all the organs of the voice, were the same, and yet the animal was dumb; the brain was formed in the same manner with that of man, and yet the creature wanted reason; an evident proof (as Mr. Buffon finely observes) that no disposition of matter will give mind; and that the body, how nicely soever formed, is formed in vain, when there is not infused a soul to direct its operations.

That of Tyson was a gentle, fond, harmless creature. In its passage to England, those that it knew on ship board, it would embrace with the greatest tenderness, opening their bosoms, and clasping its hands about them. Monkeys of a lower species it held in utter aversion; it would always avoid the place where they were kept in the same vessel; and seemed to consider itself as a creature of higher extraction. After it was taken, and a little used to wear clothes, it grew very fond of them; a part it would put on without any help, and the rest it would carry in its hands to some of the company, for their assistance. It would lie in a bed, place its head on a pillow, and pull the clothes upwards, as a man would do.

That which was seen by Edwards, and described by Buffon, shewed even a superior degree of sagacity. It walked, like all of its kind, upon two legs, even though it carried burthens. Its air was melancholy, and its deportment grave. Unlike the baboon or monkey, whose motions are violent and appetites capricious, who are fond of mischief, and obedient only from fear, this animal was slow in its motions, and a look was sufficient to keep it in awe. I have seen it, says M. Buffon, give its hand to show the company to the door; I have seen it sit at table, unfold its napkin, wipe its lips, make use of the spoon and the fork to carry the victuals to its mouth, pour out its drink into a glass, touch glasses when invited, take a cup and saucer and lay them on the table, put in sugar, pour out its tea, leave it to cool before drinking, and all this without any other instigation than the signs or the command of its master, and often of its own accord. It was gentle and inoffensive; it even approached strangers with respect, and came rather to receive caresses than to offer injuries. It was particularly fond of sugared comfits, which every body was ready to give it; and, as it had a defluxion upon the breast, so much contributed to increase



the disorder and shorten its life. It continued at Paris but one summer, and died in London. It eat indiscriminately of all things, but preferred dry and ripe fruits to all aliments. It would drink wine, but in small quantities, and gladly left it for milk, tea, or any other sweet liquor.

Such these animals appeared when brought into Europe. However, many of their extraordinary habits were probably the result of education, and we are not told how long the instructions they received for this purpose were continued. But we learn from another account that they take but a very short time to come to a great degree of imitative perfection. Mr. L. Brosse bought two young ones, that were but a year old, from a negro; and these at that early age discovered an astonishing power of imitation. They even sat at the table like men, eat of every thing without distinction, made use of their knife, spoon, and fork, both to eat their meat and help themselves. They drank wine and other liquors. When carried on shipboard, they made signs to the cabin-boys expressive of their wants; and whenever these neglected attending upon them as they desired, they instantly flew into a passion, seized them by the arm, bit them, and kept them down. The male was sea-sick, and required attendance like a human creature; he was even twice bled in the arm, and every time afterwards when he found himself out of order, he shewed his arm, as desirous of being relieved by bleeding.

There are many reasons to believe, that the most perfect of the kind go on all fours, like the rest of the quadruped creation, and only owe their erect attitude to human education. When we examine the palms of their hands and the soles of their feet, we find both equally callous and beaten; a certain proof that both have been equally used. In those hot countries where the apes are known to reside, the soles of the negroes feet, who go bare-foot, are covered with a skin above an inch thick; while their hands are as soft as those of an European. Did the ape walk in the same manner, the same exercise would have furnished them with similar advantages, which is not the case.

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## THE BADGER.

ALTHOUGH Nature has furnished this animal with formidable weapons of offence, and has besides given it strength sufficient to use them with great effect, it is notwithstanding very harmless and inoffensive; and, unless attacked, employs them only for its support.

The badger retires to the most secret recesses, where it digs its hole, and forms its habitation under ground. Its food consists chiefly of roots, fruits, grass, insects, and frogs. It is charged with destroying lambs and rabbits, but there seems to be no other reason to consider it as a beast of prey, than the analogy between its teeth and those of carnivorous animals.

Few creatures defend themselves better, or bite with greater keenness than the Badger. On this account it is frequently baited with dogs trained for that purpose. This inhuman diversion is chiefly confined to the idle and the vicious, who take a cruel pleasure in seeing this harmless animal surrounded by its enemies, and defending itself from their attacks, which he does with astonishing agility and success. Its motions are so quick, that a dog is frequently desperately wounded in the first moment of assault, and obliged to fly. The thickness of the Badger's skin, and the length and coarseness of its hair, are an excellent defence against the bites of the dogs: its skin is so loose, as to resist the impressions of their teeth, and give the animal an opportunity of turning itself round, and wounding its adversaries in their tenderest parts. In this manner this singular creature is able to resist repeated attacks both of men and dogs from all quarters; till, being overpowered with numbers, and enfeebled by many desperate wounds, it is at last obliged to submit. The Badger is an indolent animal, and sleeps much. It confines itself to a hole during the whole day, and feeds only in the night. It is not known to exist in warm countries. It is an original native of the temperate climates of Europe; and is found, without any variety, in Spain, France, Italy, Germany, Britain, Poland, and Sweden.

The usual length of the Badger is somewhat above two feet, exclusive of the tail, which is about six inches long; its eyes are small, and are placed in a black stripe, which begins behind the ears, and runs tapering towards the

nose ; the throat and legs are black ; the back, sides, and tail, are of a dirty grey, mixed with black ; the legs and feet are very short, strong, and thick ; each foot consists of five toes ; those on the fore feet are armed with strong claws, well adapted for digging its subterranean habitation.

In walking, the Badger treads on its own heel, like the Bear, which brings its belly very near the ground.

The skin, when dressed with the hair on, is used for pistol furniture. Its flesh is eaten ; the hind quarters are sometimes made into hams, which, when cured, are not inferior in goodness to the best bacon. The hairs are made into brushes, which are used by painters to soften and harmonize their shades.

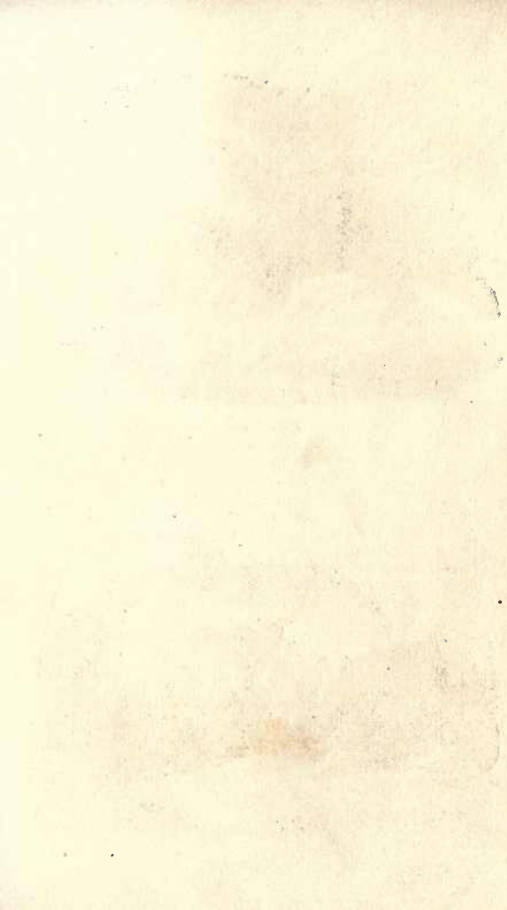
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## THE NYL-GHAU.

THIS animal is a native of the interior parts of India. It seems to be of a middle nature between the cow and the deer, and carries the appearance of both in its form. Its body, horns and tail, are not unlike those of a bull ; and the head, neck, and legs, are similar to those of a deer. The colour, in general, is ash or grey, from a mixture of black or white hairs, having a short, thin, and upright mane reaching down to the hump. Its horns are seven inches long, and six inches round at the root, tapering by degrees, and terminating in a blunt point. The ears are large and beautiful, white on the edge and on the inside, except where two black bands mark the hollow of them with a Zebra-like variety. The height of this animal, at the shoulder, is four feet one inch ; behind the loins it measures only four feet.

The female differs considerably from the male in shape and colour, and has no horns. She is supposed to go nine months with young, and has one at a birth, but sometimes two.

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*Pole Cat.*



*Mice.*

## THE POLE-CAT, OR FITCHET.

THIS animal is nearly a foot and a half long, exclusive of the tail, which is about six inches. The colour is a deep chocolate, with a space of white round the mouth, and the ears are likewise tipped with white. It is long, slender, and active, and is very destructive to poultry, pigeons, and rabbits. A single Pole-cat is sufficient to despoil a whole warren: for it has such an insatiable thirst for blood, that it kills as well from wantonness as from necessity. The female brings forth five or six young at a time, but the species is not very numerous, and seems confined to latitudes equally remote from heat and cold.

When alive, the smell of the Pole-cat is rank and disagreeable, even to a proverb; however, its skin is dressed with the hair on, and used for various purposes, although its offensive smell can never be altogether removed or suppressed.

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## THE CIVET CAT.

THIS animal is an inhabitant of many parts of India and Africa. It is more than two feet long, with a thickish body, and sharp lengthened head. The hair is coarse, and forms a mane on the back. The general colour of the body is yellowish ash grey, marked with large dusky spots, placed in rows across the back and limbs. The sides of the face, chin, legs, and breast are black, and the other parts of the face and neck of a yellowish white. The ears are small and round, the eyes bright blue, the nose tipped with black. The civet is of a wild disposition, and preys, like others of the genus, on small animals: it is active and nimble. This animal is capable of being domesticated, and is kept by the perfumers of Amsterdam for the sake of the civet which it produces. This drug is secreted in a peculiar gland near the tail, which empties of its own accord. When kept in confinement, the creature is placed some time in a wooden box, so contrived that it cannot turn round to bite the person employed in collecting the civet. This is obtained from the animal by scraping it

with a wooden spoon twice a week. The substance is yellowish, and when new, its scent is so strong as to cause giddiness : it becomes more pleasant after being kept. Civet is no longer used by the physicians of Europe ; but as a perfume, it is still an object of commerce. It is larger and stronger than the tame cat, and its fur much longer, and is taken either in traps, or by shooting. There is frequently danger in the latter mode ; for if it be only slightly wounded, it will attack the person who has injured it, and is not easily repelled

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## THE MOUSE.

The Common Mouse is too well known to require a particular description ; it is found in every part of the old continent, but it is doubted whether it was a native of either America. The mouse is wild and timid, but not ferocious, and is easily tamed, so as to become familiar with those about it.

The white variety is frequently kept tame, and has brightened eyes, in common with the white varieties of most quadrupeds.

The mouse is very prolific ; in proof of which, we may adduce the experiment of Aristotle, who placed a pregnant mouse in a vessel of grain, and found there, in a short time, no less than 120 of her offspring. The hairs of the mouse presents when magnified a very curious appearance, being divided as if by a continued spiral fibre, into partitions across their length.

The Wood Mouse abounds in the fields of all the temperate parts of Europe, and frequently does great damage by devouring the newly-sown acorns. The food of the wood mice consists of acorns, beech-mast, nuts, &c. ; of which they lay up a large store for winter consumption. Their habitations are formed under ground, and often consist of two apartments, the one for the residence of the family, the other for the winter provision. The general length of the wood mouse is four inches and a half, its tail measures four inches ; the colours, which are pretty distinctly marked, are yellowish brown above, and whitish



beneath; the eyes are full and black, and the snout rather blunt.

The Harvest Mouse may be considered the smallest of British quadrupeds. It is two inches and a quarter long; its tail measures two inches; and its weight is about the third of an ounce, avoirdupoise. This little animal lives entirely in the fields, but is sometimes brought into the barns with the sheaves of corn; the number of young produced at one birth usually amount to eight, and they are placed in a small round nest, composed of the blades of wheat. One such was found in the head of a large thistle; it was of the size of a cricket ball, perfectly closed, and entirely filled with eight little mice, naked and blind. It is supposed that the dam, in order to suckle her young, must alternately have opened the place most convenient for each. These little animals make their nests for breeding only; they burrow in the winter, forming warm beds of grass under ground.

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## THE BEAVER.

THIS animal is far less remarkable for the singularity of its conformation than for its astonishing instincts, which some have exalted into a species of intellect. It has a flat broad tail covered with scales, which it uses as a rudder; and its toes are webbed, a property which enables it to swim with greater facility than to walk. The length of the beaver is about two feet, and its tail eleven inches: it has strong cutting teeth, short ears, and a blunt nose. It is found in the northern parts of Europe, Asia, and America; but it is chiefly in the less frequented regions of the latter that its habitudes and genuine instincts are most strongly marked, and therefore form the properest subject for observation. In all countries, where civilized man prevails, many of the inferior animals are repressed and degraded in their character, but where he seldom intrudes, all their native propensities are exercised, and appear in full vigour.

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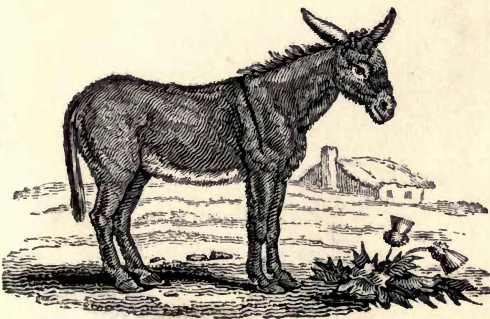
## THE ZEBRA

Is chiefly a native of the Southern parts of Africa; and there are whole herds of them often seen feeding in those extensive plains that lie towards the Cape of Good Hope. However, their watchfulness is such, that they will suffer nothing to come near them; and their swiftness so great, that they readily leave every pursuer far behind. The zebra, in shape, rather resembles the mule than the horse or the ass. It is rather less than the former, and yet larger than the latter. Its ears are not so long as those of the ass, and yet not so small as in the horse kind. Like the ass, its head is large, its back straight, its legs finely placed, and its tail tufted at the end; like the horse, its skin is smooth and close, and its hind quarters round and fleshy. But its greatest beauty lies in the amazing regularity and elegance of its colours. In the male, they are white and brown; in the female, white and black. These colours are disposed in alternate stripes over the whole body, and with such exactness and symmetry, that one would think Nature had employed the rule and compass to paint them. These stripes, which, like so many ribbons, are laid all over its body, are narrow, parallel, and exactly separated from each other. It is not here as in other party-coloured animals, where the shades of colour run into each other; every stripe is perfectly distinct, and preserves its colour round the body or the limb, without any diminution. In this manner are the head, the body, the thighs, the legs, and even the tail and the ears beautifully streaked, so that, at a little distance, one would be apt to suppose that the animal was dressed out by art, and not thus admirably adorned by nature.

In the male zebra, the head is striped with fine bands of black and white, which are in a centre manner in the forehead. The ears are variegated with a white and dusky brown. The neck has broad stripes of the same dark brown, running round it, leaving narrow white stripes between. The body is striped also across the back with broad bands, leaving narrower spaces of white between them, and ending in points at the sides of the belly, which is white, except a black line marked like a comb on each side reaching from between the forelegs, along the middle of the belly, two thirds of its length. The colours are different in the female; in none do the stripes seem entirely



*Zebra.*



*Ass.*



to agree in form, but in all are equally distinct; the hair equally smooth and fine; the white shining and unmixed; and the black, or brown, thick and glossy.

Such is the beauty of this creature, that it seems by nature fitted to satisfy the pride and the pleasure of man; and formed to be taken into his service. Hitherto, however, it appears to have disdained servitude, and neither force nor kindness have been able to wean it from its native independence and ferocity. But this wildness might, perhaps, in time be surmounted; since it is probable, the horse and ass, when first taken from the forest, were equally obstinate, fierce and unmanageable. Mr. Buffon informs us, that the zebra, from which he took his description, could never be entirely mastered, notwithstanding all the efforts which were tried to tame it. They continued, indeed, to mount it, but then with such precautions as evidently showed its fierceness, for two men were obliged to hold the reins, while the third ventured upon its back, and even then it attempted to kick whenever it perceived any person approaching.

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## THE WILD ASS

Has, by some writers, been confounded with the zebra, but very improperly, for they are of a very different species. The wild ass is not streaked like the zebra, nor is his shape so beautiful: his figure is pretty much the same as that of the common ass, except that he is of a brighter colour, and has a white list running from his head to his tail. This animal is found wild in many islands of the Archipelago, particularly in that of Cerigo. There are many wild asses in the deserts of Lybia and Numidia, that run with such amazing swiftness, that scarcely even the coursers of the country can overtake them. When they see a man, they set up a horrid braying, and stop short altogether, till he approaches near them; they then, as if by common consent, fly off with great speed; and it is upon such occasions that they generally fall into the traps which are previously prepared to catch them. The natives take them chiefly on account of their flesh, which they esteem as delicious eating; and for their skins, of which that kind of leather is made which is called shagreen.

Olearius relates that the monarch of Persia invited him, on a certain day, to be present at an entertainment of a very peculiar nature, which was exhibited in a small building near the palace, resembling a theatre. After a collation of fruits and sweetmeats, more than thirty of these wild asses were driven into the area, among which the monarch discharged several shot, and some arrows, and in which he was imitated by some of the rest of his attendants. The asses, finding themselves wounded, and no way of escaping, instantly began to attack each other, biting with great fierceness, and braying terribly. In this manner, they continued their mutual animosity, while the arrows were poured in from above, until they were all killed; upon which they were ordered to be taken, and sent to the king's kitchen at Ispahan.

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### THE ASS,

Like the horse, was originally imported into America by the Spaniards, and afterwards by other nations. That country seems to have been peculiarly favourable to this race of animals; and, where they have run wild, they have multiplied in such numbers, that in some places they are become a nuisance. In the kingdom of Quito, the owners of the ground where they are bred, suffer all persons to take away as many as they can, on paying a small acknowledgment, in proportion to the number of days their sport lasts. They catch them in the following manner:—A number of persons go on horseback, and are attended by Indians on foot: when arrived at the proper places, they form a circle in order to drive them into some valley: where, at full speed, they throw the noose, and endeavour to halter them. Those creatures, finding themselves inclosed, make very furious efforts to escape; and, if only one forces his way through, they all follow with an irresistible impetuosity. However, when noosed, the hunters throw them down and secure them with fetters, and thus leave them till the chase is over. Then, in order to bring them away with greater facility, they pair them with tame beasts of the same kind; but this is not easily performed, for they are so remarkably fierce, that they often hurt the persons who undertake to manage them. They have all the swiftness of horses, and neither hills nor precipices can retard their career. When attacked, they



defend themselves with their heels and mouth with such activity, that, without slackening their pace, they often maim their pursuers. But the most remarkable property in these creatures is, that after carrying their first load, their swiftness leaves them, their dangerous ferocity is lost, and they soon contract the stupid look and dullness peculiar to the ass. It is also observable, that these creatures will not permit a horse to live among them. They always feed together ; and if a horse happens to stray into the place where they graze, they all fall upon him ; and without giving him the liberty of flying, they bite and kick him, till they leave him dead upon the spot.

Such is this animal in its natural state, swift, fierce, and formidable ; but, in his state of tameness, the ass presents a very different picture ; the moment his native liberty is gone, he seems entirely to give up all claim to freedom ; and he assumes a patience and submission even humbler than his situation. He is, in a state of tameness, the most gentle and quiet of all animals. He suffers with constancy, and, perhaps, with courage, all the ill-treatment that cruelty and caprice are pleased to inflict. He is temperate with regard to the quantity and quality of his provision. He is contented with the most neglected weeds : and makes his humble repast upon what the horse and other animals leave behind. If he gives the preference to any vegetable, it is to the plantain ; for which he is often seen to neglect every other herb in the pasture : but he is chiefly delicate with respect to his water, he drinks only at the clearest brooks, and chiefly those to which he has been accustomed. He drinks as soberly as he eats ; and never, like the horse, dips his nose into the stream. As he is seldom saddled, he frequently rolls himself upon the grass ; and lies down, for this purpose, as often as he has an opportunity, without minding what becomes of his burthen. He never rolls, like the horse, in the mud ; he even fears to wet his feet ; and turns out of his way, to avoid the dirty parts of the road.

When very young, the ass is sprightly, and even tolerably handsome ; but he soon loses these qualifications, either by age or bad treatment, and he becomes slow, stupid, and headstrong. The she-ass is very fond of her young ; and we are assured that she will cross fire and water to protect or rejoin it. This animal is sometimes much attached to its owner, by whom he is too often abused. He scents him at a distance, and distinguishes him from



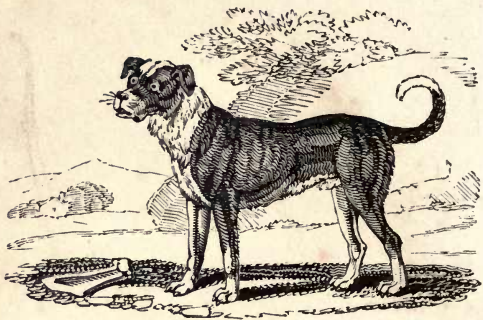
others in a crowd ; he knows the way he has passed, and the places where he inhabits.

When over-loaded, the ass shews the injustice of his master, by hanging down his head and lowering his ears ; when he is too hard pressed, he opens his mouth, and draws back his lips in a very disagreeable manner. If his eyes are covered, he will not stir a step ; and if he is laid down in such a manner that one eye is covered with the grass while the other is covered with a stone, or whatever is next at hand, he will continue fixed in the same situation and will not so much as attempt to rise, to free himself from those slight impediments. He walks, trots, and gallops like a horse ; but, although he sets out very free at first, yet he is soon tired ; and then no beating will make him mend his pace. It is in vain that his unmerciful rider exerts his whip or his cudgel ; the poor little animal bears it all with patience, and without a groan ; and, conscious of his own weakness, does not offer even to move.

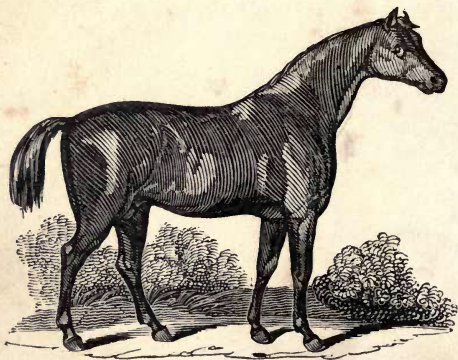
Notwithstanding the stupid heaviness of his air, he may be educated with as much ease as any other animal, and several have been brought up to perform, and exhibited as a show. In general, however, the poor animal is entirely neglected. Man despises this humble useful creature, whose efforts are exerted to please him, and whose services are too cheaply purchased. The horse is the only favourite, and upon him alone all expense and labour are bestowed. He is fed, attended, and stabled, while the poor ass is abandoned to the cruelty of the lowest rustics, or even to the sport of wicked children, and, instead of gaining by the lessons he receives, is always a loser. He is conducted on by blows ; he is insulted by unnecessary stripes ; he is overloaded by the lazy ; and, being generally the property of the poor, he shares with them in their wants and distresses. Thus this faithful animal, which, were there no horses, would be the first of all four footed beasts in our esteem, is now considered as nothing ; his properties and qualifications being found in a higher degree elsewhere, he is entirely disregarded ; and from being the second, he is degraded into one of the most useless of the domestic quadrupeds.

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*Bull Dog.*



*Horse.*

## THE BULL-DOG.

THIS is a very fierce, strong, and savage creature, frequently seizing or biting without giving any notice of his approach. He is peculiar to this island; but, since the savage sport of bull-baiting has given way to more refined pastimes, the breed has become scarce. Humanity is almost prompted to indulge a wish that the kind may become utterly extinct. While one of the species remains, it will recall the disgraceful remembrance of vulgar barbarism, and perpetuate the stigma of our once tasteless amusements and cruel manners.

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## THE HORSE.

The various excellencies of this noble animal,—the grandeur of his stature, the graceful ease, his strength, the glassy smoothness of his skin, and, above all, his ability, entitle him to a place next to man in the history of the brute creation.

To form an adequate idea of this noble animal, we must not contemplate him in a domestic state, beautiful as he appears, but in those wild and extensive plains where he ranges without controul, and riots in all the luxury of uncultivated nature; it is here that he appears in his grandeur.

There are few parts of the world where the horse is not produced.

In the boundless tracks of Africa or New Spain, where the horse runs at liberty, he seems no way incommoded with the inconveniences to which he is subject in Europe. His enemies of the forest are but few, for none but the greater kinds will venture to attack him; any one of these he is singly able to overcome, while at the same time he is content to find safety in society; for the wild horses of those countries always herd together,—and are not unfrequently seen feeding in droves of five or six hundred. When they sleep in the forest they have generally one of their number that stands as sentinel, to give notice of any approaching danger, and this they often take in turns.—If

a man approaches them while they are feeding by day, this sentinel walks boldly near him as if to examine his strength, or to intimidate him from proceeding ; but if the man appears within pistol-shot the sentinel then thinks it high time to alarm his fellows : this he does by a loud kind of snorting, upon which they all take the signal, and fly off with the speed of the wind ; their faithful sentinel bringing up the rear.

There is scarcely an Arabian, how poor soever in other respects, but is possessed of his Horse, which he considers as an invaluable treasure ; and having no other dwelling but a tent, himself, his horse, and family, live upon the most equal terms. The Arabs never beat their horses ; they speak to, and seem to hold friendly intercourse with them. We have been particularly struck with the affectionate regard displayed by one of these people in the following anecdote :—

“The whole stock of a poor Arabian of the desert consisted of a beautiful mare : this the French consul at Said offered to purchase, with an intention to send her to Louis XIV. The Arab, pressed by want, hesitated a long time, but at length consented on stipulating for a considerable sum of money, which he named. The consul wrote to France for permission to close the bargain, and having obtained it, immediately sent information thereof to the Arab. The man, so poor as to possess only a miserable covering for his body, arrived with his magnificent courser. He dismounted, and, looking first at the gold and then stedfastly at his mare, heaved a deep sigh :—‘To whom (he exclaimed) am I going to yield thee up ? To Europeans ! who will tie thee close, who will beat you, who will render thee miserable ! Return with me, my beauty ! my jewel ! and rejoice the hearts of me and my children.’ As he pronounced the last words, he sprang upon her back, and was out of sight almost in an instant.”

What an amiable and affecting sensibility in an untutored Arab !

As a counterpart to the above, we shall here introduce an account of a recent occurrence equally replete with sentiment and humanity : During a campaign in the peninsula of Spain, while our troops were under the command of that brave and lamented officer, the late General Sir John Moore, there was, among the regiments of cavalry there, a man named Ford, who, having seen a great deal of service in that country, had conceived a particular degree of regard for the honest animal that had

borne him safely over its rugged mountains, had shared with him the dangers of the battle, and had often proved the means of safety when the chance of war dictated the prudence or necessity of retreat. While engaged in one of these rapid marches, and having occasion to stop for refreshment, the animal's progress being thus suddenly checked, he became exposed to the influence of a cool atmosphere; the consequence of which was, that the horse caught so severe a chill, as seemed to baffle every effort of his disconsolate rider (as well as those of the farrier) to restore him to his pristine vigour. About this time the men and horses were ordered to attend a muster, when the miserable state of our poor quadruped being observed by the inspecting officer, he preremptorily commanded it to be shot.

The distress of mind which the dragoon suffered, on hearing this sentence, was (as might be expected from his previous character) extreme. He therefore requested a farrier of the regiment to perform the distressing office of executioner, as the idea of destroying the companion of his dangers, as well as the sharer of what few comforts had fallen to his lot during the campaign, was to him an insupportable idea. With a heavy heart, therefore, he resigned his faithful creature to the hands of the messenger of death. The painful moment of separation between the suffering horse and his still more suffering master was now arrived; but at this affecting crisis the animal turned completely round, and, looking pointedly and piteously on the chief object of all his affections, seemed to say:—“Must we then part, my kind and generous master? can nothing be done for your poor slave, that I may still enjoy the pleasure of bearing you in safety, and continue to evince my gratitude for the many favours, attentions, and caresses, bestowed upon your now miserable animal?”

The man was completely subdued—he resolved to risk all for the salvation of his horse—he therefore inquired eagerly of the farrier whether there was yet a possibility of saving the poor creature before them? His comrade replied in the affirmative, but dreaded the idea of disobeying his officer's commands; however, at the earnest entreaty of Ford, he was at length prevailed on to make every effort, in concert with the latter, to restore the diseased object to a state of health and soundness. To work, then they went; and, by the aid of proper external and internal remedies unremittingly applied, our dragoon



had the inexpressible satisfaction of finding the health of his darling renovated, of seeing that eye which had been lately dimmed by the paralyzing power of sickness dart forth its accustomed lustre, beaming benignity and gratitude upon his deliverer from premature death, and of again bestriding his favourite charger, who carried him once more in triumph among the ranks of his companions in arms, where the prying eye of his officer, however, soon discovered the animal whom he had but lately consigned to death. On this discovery, Ford was sharply questioned as to the cause of his temerity in daring to disobey the commands of his superior. The poor fellow, fearful of the consequences of such an action, unhesitatingly acknowledged the whole simple truth, and concluded with entreating forgiveness; which the captain not only granted, but sealed his pardon, in presence of the whole regiment, with a considerable present in money, and added many exalted encomiums on the sympathy and benevolence of this British dragoon.

The Horses of India and many parts of China are extremely small and vicious. One of these was some years ago brought into this country as a present to the queen, which was very little larger than some mastiffs, measuring only nine hands in height.

In Great Britain the breed of Horses seems to be as mixed as that of its inhabitants. By great attention to the improvement of this noble animal, by a judicious mixture of several kinds, and by superior skill in management, the English Race-Horse is allowed to excel those of the rest of Europe or perhaps the whole world. For supporting a continuance of violent exertion, they are superior to the Arabian, the Barb, or the Persian; and, for swiftness, they will yield the palm to none.

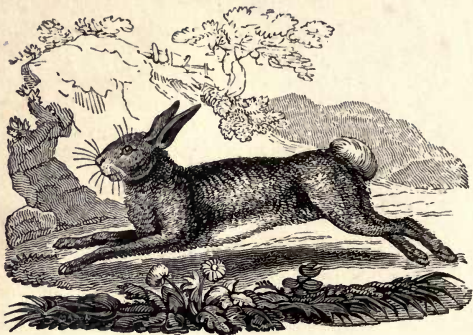
The Hunter is a happy combination with others of superior strength, but inferior in its swiftness, and may be considered as the most useful kind of horses in Europe.

The various breeds of the Horse are numerous in this country; but we shall only notice, in conclusion, the common Cart-Horse. His form is heavy, his motions slow, and his aspect without sprightliness: he is nevertheless extremely useful, and is employed for purposes of agricultural and other domestic concerns.

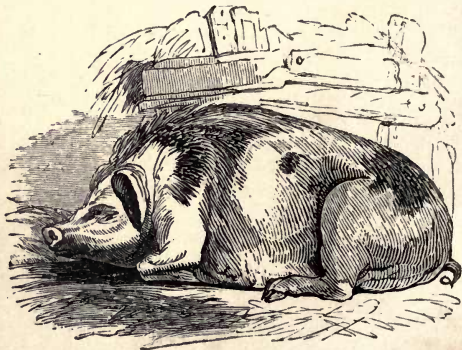
The females go with young eleven months and some days, continue to breed till the age of sixteen or eighteen years, and live, on an average, between twenty and thirty years.







*Hare.*



*Sow.*

Although endowed with vast strength and uncommon powers, the Horse seldom exerts either to the prejudice of his master; on the contrary, he shares with him in his labors, and appears to participate in his pleasures. Generous and persevering, he gives up his whole powers to the service of his owner: though bold and intrepid, he seems to repress the natural vivacity and fire of his temper, and not only yields to the hand, but seems to consult the inclination of his rider. But it must continue to be matter of deep regret to every feeling mind, that these excellent qualities should often be shamefully abused in the most unnecessary exertions, and the honest labours of this noble animal thrown away in the ungrateful task of accomplishing the purposes of unfeeling folly, or lavished in gratifying the expectations of an intemperate moment.

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## THE HARE.

The form of this animal is well and generally known; but its habits, which are well deserving our attentive notice, are often overlooked. Timid and persecuted, the prey of men and animals for its flesh, and the object of savage sport to the idle or wauton, did it not owe much to a principle of fear, which is ever awake for its preservation, and to its amazing fecundity, the breed would long ere now have become extinct.

In order to enable this innocent and delicate creature to perceive the most distant approaches of danger, nature has provided it with very long ears, which, like tubes, convey remote sounds; and with prominent eyes, which receive the rays of light on every side. It is also endowed with extraordinary swiftness, and, from its hind legs being longer than the fore, has the peculiar advantage of an ability to run up ascents with more facility than any of its pursuers. Every species of dog hunts it by instinct, while the cat and the weasel tribe exercise all their little arts to ensnare it; but its most inveterate and destructive enemy is man, who leagues with dogs, or employs the murderous gun to thin its numbers, often more for needless pastime, than for the value of the spoil.

The aliment of this animal is wholly vegetable, and no

kind, even the bark of trees, comes amiss to it. They seldom live more than seven or eight years, even should they escape the multiplied dangers to which they are exposed. They pass a life of solitude and silence; and are capable of some domestication; in which state they become fond and caressing: but their attachment to any particular person is very weak, and they are sure to watch and lay hold of the first opportunity to regain their native liberty and independence.

The influence of climate is very perceptible in these animals. In the northern countries they assume a white colour in winter, and assemble in large troops. The hares found in warmer latitudes are smaller than those of Britain, and have a thinner fur. They are generally diffused over every climate, from the northern regions to the line, from the line towards the southern pole.

The fur of hares is an article of considerable importance in the hat manufactory. Their flesh is reckoned very delicate eating among some nations, although from superstitious or other motives it is detested among others.

The Calling is an inhabitant of the South-eastern part of Russia, and is also found among the mountains that extend from the Uralian chain, about the river Irtysh and the western Altaic mountains. It is nearly six inches long, of a brownish lead-colour above and whitish below. This little animal forms an oblique burrow on some dry declivity, covered with fine compact turf and bushes. It is a solitary animal, and seldom seen. It betrays its residence by its voice, which resembles that of a quail, and is heard early in the morning, and after sunset. It is astonishingly loud for so small an animal. The Calling Hare becomes tame almost as soon as caught, being very gentle; it sleeps but little, and then, like the common Hare, with open eyes. It generally sits with its body drawn up, and its hind legs brought near the face; in this position it will just fill the hollow of the hand. It may be easily fed with the leaves of various shrubs and plants. Its young are very helpless at first, being blind and naked, but they soon acquire fur and sight.

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## THE DOMESTIC SOW.

It would be superfluous to give an elaborate description of an animal so well known. In a domestic state, the Hog is apparently the most impure and filthy of all quadrupeds; yet it is not without its taste, and in some respects makes a selection of its food with no small nicety. It devours, indeed, the most nauseous offals, but this is only when it cannot find aliment more congenial to its palate.

We find varieties of it in every climate, except within the frigid zone; and different as their appearance may be from the nature of their food, and other local causes, all the breeds intermix, and will thrive in any temperate latitude. In civilized countries, it is one of the greatest comforts of the poor; and among the unrefined islanders of the South Sea, &c. which our navigators have discovered or visited, it is almost the only animal on which they feed. Their flesh, says Linnæus, is wholesome for persons of athletic constitutions, and for such as habituate themselves to much exercise; but it is improper for the sedentary and studious, and particularly when cured.

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## THE RABBIT.

THOUGH the Hare and the Rabbit strongly resemble each other in form and habits, they are, nevertheless, distinct species, and have never been known to intermix. The rabbit is one of the most prolific and harmless animals in stature; and, at the same time, one of the most beneficial to mankind. This creature has been known to breed seven times in one year, and to bring forth eight each time; from which, admitting this to happen regularly for four years, it follows that a single pair would multiply in that period to one million two hundred and seventy-four thousand eight hundred and forty! An instance of fecundity truly astonishing; and, were not their numbers thinned by the ravages of almost every beast of prey, they would almost be sufficient to supply mankind with animal food. Indeed,

in some countries they have multiplied to such a degree that the inhabitants consider them as a nuisance. Though capable of enduring a pretty severe climate, they seem to delight in a temperate one ; so that in Sweden, they are obliged to be sheltered in houses, and in the more northern regions they are wholly unknown.

Tame Rabbits, as if conscious of protection, never dig holes for their retreats ; and they assume a variety of colours. Wild rabbits, on the other hand, are uniformly brown, and burrow in the earth. The flesh of the latter is most esteemed, as well as their furs.

Like the hare, there are different species of rabbits, not only in the old continent, but in the new. That of Brazil has scarcely the rudiments of a tail.

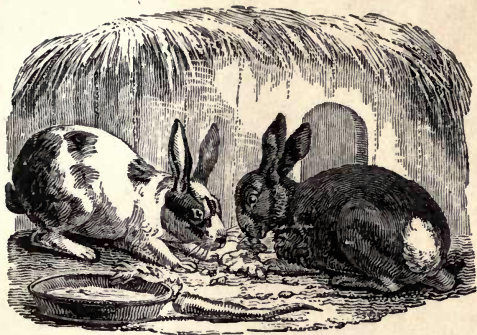
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## THE FERRET.

The Ferret has been naturalized in Europe, but it originally came from Africa, and was first imported into Spain, in order to free that country from the multitudes of rabbits with which it was overrun ; and thence the breed has spread over other parts of this continent. It is about a foot long, with red fiery eyes, and round ears. The usual colour is a pale yellow, but it is frequently varied with black, white, and brown. It is a lively, active animal, and seems to have a predilection for rabbits, and is naturally such an enemy to them that if a dead rabbit be laid before a young ferret, it will instantly seize upon it, although it has never seen one before ; if a living rabbit be presented to it, the ferret is still more eager, seizes it by the neck, winds itself round it, and continues to suck its blood, till it is satiated. If the ferret is suffered to go into the warren without a muzzle, or gets disengaged from it whilst in the hole, there is a great danger of losing it ; for, after satisfying itself with the blood, it falls asleep and it is then almost impossible to come at it.—The usual methods of recovering the ferret are by digging it out, or smoking the hole.

The ferret is generally domesticated, and trained up to the purposes of catching rabbits and rats. From the slenderness of its body, it is able to enter the holes of the



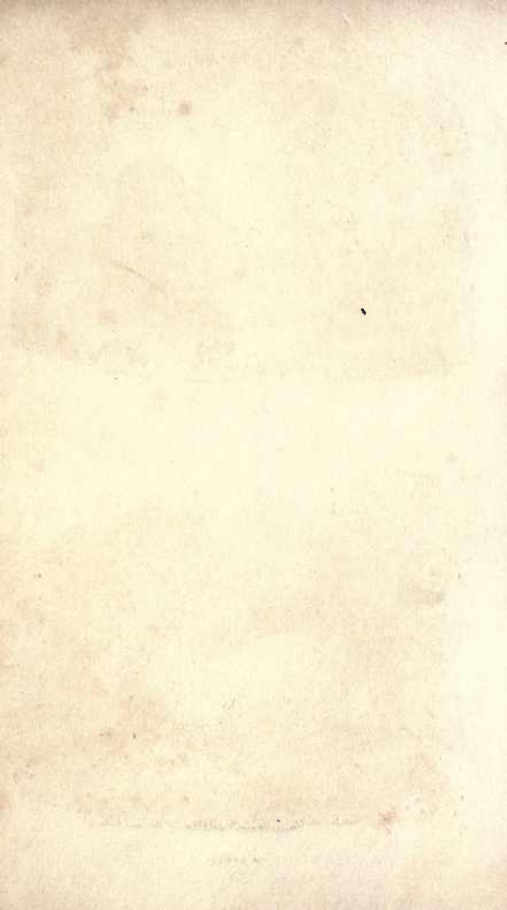


*Rabbits.*



*Ferret.*





latter, and seldom suffers them to escape. The female is visibly less than the male, and breeds twice a year. They require to be kept warm in our climate, and are generally fed with bread and milk.

This is an useful animal, but offensive from its disagreeable scent. It is voracious in its nature; and, though tame, is without attachment. Such is its appetite for blood, that it has been known to attack and kill children in the cradle. It is very irritable; and, when provoked, emits a most nauseous smell. Its bite is not cured without great difficulty.

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### THE GUINEA-PIG.

Few are acquainted with the figure of this elegant little creature, which is often reared with fond attention, as a domestic favourite. It is considerably smaller than the rabbit: its legs and neck are very short, and it has not even the vestige of a tail. It has the hare lip; but differs from the hare in the number of its toes. Like other creatures, when taken under the protection of man, its colours vary.

Of all animals, the Guinea-pig is perhaps the most pusillanimous. It has scarcely courage enough to defend itself from a mouse: and the only animosity which it is ever seen to display, is against its own kind. Indeed, the combats of these little animals are ridiculous enough to a spectator. Their jealousies are quickly excited by the most trivial causes; on which occasion they fight in a manner, no doubt terrible to each other, however whimsical and ludicrous it may appear to us. They scratch, bite, and kick, and sometimes inflict dangerous wounds. A falling leaf, however, will disturb them, and the rustling of the wind alarms them, and the most contemptible foe overcomes them.

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## THE RACCOON.

THE head of this animal resembles that of the fox ; its nose is prolonged a great way beyond the upper jaws. It is found in North America, and is about two feet long, and a foot high.

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## THE MARMOT.

THIS animal resembles the hare in the shape of its head ; but its ears are much shorter, and the tail more tufted ; the body is clothed with a long hair, under which is a fine short fur of different colours.

The Marmot is a native of the Alps, and is likewise found in Poland, and part of Tartary, and, with some specific differences, in Africa and America. When taken young, it is easily tamed, taught to dance, to obey the call of its master, and to perform several tricks for his amusement. It is, in general, a very harmless, and inoffensive animal ; and except in its antipathy to dogs, which appears invincible, it lives in friendship with every creature that abstains from giving it provocation.

Marmots feed indiscriminately on flesh, bread, fruit, or vegetables ; but are particularly fond of milk and butter. When irritated, or frightened, they utter a piercing cry. It speedily arrives at maturity ; consequently, its life is pretty limited, seldom exceeding nine or ten years.

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## THE GLUTTON

Is about two feet and a half long ; of a reddish colour,—feeds on hares, mice, and birds. The legs are extremely short in proportion to its size. The fur, which is holden in the highest estimation on account of its softness and beautiful gloss, is black along the back, and of a reddish-brown on the sides. Its conformation enables it to climb up trees

with greater facility than to proceed along the ground ; and consequently it catches its prey rather by surprise than pursuit.

In North America this voracious creature is frequently seen lurking among the thick branches of trees on purpose to seize deer and other animals. Endued with perseverance equal to its rapacity, it will watch in silent expectation for several days successively ; but no sooner does its prey come within its reach, than it drops with unerring aim on its victim, fastens its claws between the shoulders, and obstinately retains its hold till it has eaten through the neck and opened the large blood vessels. It is astonishing to consider how much flesh one of these animals is capable of devouring at a time.

Gluttons, like all the rest of their kind, are solitary animals. They burrow in holes, and are very resolute in defence of their offspring, fighting against dogs with the greatest obstinacy, and biting with the most tenacious grasp. The hunters, however, pursue them with much animation for the sake of their furs, which possess the most beautiful lustre imaginable, and are preferred for some uses to all others, except those of the Siberian fox and the sable.

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## THE AGOUTI.

This animal seems to be a middle species between the hare and the marmot. It is very numerous in South America, and has been denominated the rabbit of that continent, which it resembles in size ; its ears, however, are shorter, its back arched, and its hair bristly. Its tail also is shorter, and entirely destitute of hair, and the number of its toes are different from that of the hare kind. In disposition, no similitude can be traced ; it is voracious in all its appetites, and little nice in its selection of food. It burrows in the cavities of trees ; is sharp sighted, agile, and capable of being reclaimed ; after which it seldom reverts to its original wildness.

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## THE BULL.

Notwithstanding the great changes that have taken place in the breed of our English Bull by the introduction of foreign kind, the Lancashire, Westmoreland, and Cumberland Bulls still form, there is every reason to believe, the prevailing stock of the kingdom at large. Great improvements have of late years been made, both as to beauty and utility of form. Craven, in Yorkshire, has long been celebrated for a superior variety of the long-horned kind; and from thence the graziers of Westmoreland and Lancashire purchased the flower of the heifers.

Some of these bulls are extremely large. Their horns are not long, but beautifully turned; their hair short and smooth; their crests rise extremely high; their chests are let down to their knees; their bodies are long and in the form of a perfect cylinder.

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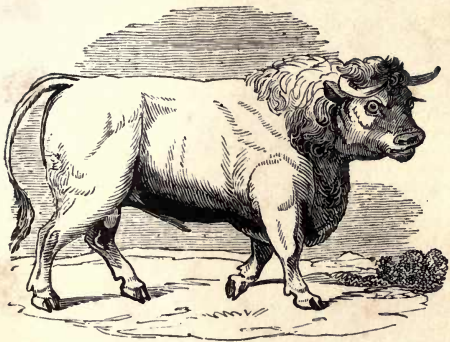
## THE URUS, OR WILD BULL,

Is chiefly met with in the extensive forests of Lithuania. It grows to a size equal to the elephant, and is quite black; the eyes are red and fiery, the horns thick and short, and the forehead covered with a quantity of curled hair; the neck is short and strong, and the skin has an odour of musk. The female, though not so big as the male, exceeds the largest of our bulls in size.

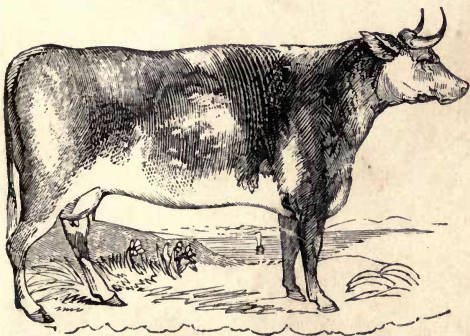
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## THE BISON

Differs from the rest of the ox kind, in having a large bump between its shoulders, almost as high as that of a camel. He has a long, shaggy mane, which forms a kind of beard under his chin, his eyes are fierce, his forehead large, and his horns extremely wide. 'Tis dangerous to pursue him, except in forests abounding with trees large enough to conceal the hunters. He is generally taken in pits covered with branches of trees and grass, on the



*Bull.*



*Cow.*





opposite side of which the hunters tempt the animals to pursue them ; and the enraged creature running towards them, falls into the trap prepared for it, and is then overpowered and slain.

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## THE COW.

OF the various domestic animals, the cow may be said to be most universally conducive to the comforts of mankind. The horse generally falls to the lot of the rich ; sheep are kept in flocks and require attendance ; but the cow is more particularly the poor man's blessing, and furnishes the principal means of his support.

The climate and pasturage of this island are admirably suited to the moderate nature of the cow ; it loves to graze in high and rich pastures ; and here its taste is highly and amply gratified. In consequence, it grows to a very large size, and yields an abundant supply of milk.

The cow seems more subject to changes from climate and food than any other quadruped. Within the narrow bounds of the British islands, we can easily trace the different varieties produced among these animals by the richness or poverty of the land. Indeed, in every part of the world the cow is found either large or small, in proportion to the luxuriant or scanty nature of its aliment.

The age of the cow is known by the teeth and horns. It is furnished with eight cutting teeth in the lower jaw, at the age of ten months, the two middlemost of these fall out, and are replaced by others, that are not so white, but broader ; at the age of sixteen months, the two next milk-white teeth fall out likewise, and others come up in their room : thus at the end of every six months the creature loses and gains, till, at the age of three years, all the cutting teeth are renewed, and then they are long, pretty white and equal, but in proportion as the animal advances in years, they become irregular and black, their inequalities become smoother, and the animal less capable of chewing its food.

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## THE COMMON OX

Is the Bison reduced to a domestic state; in which it runs into numerous varieties, depending on climate and other circumstances. The breed natural to these countries appears to have been inferior to those of the continent. In the highlands of Scotland, the cattle are very small and hornless; this latter peculiarity is likewise found in a large breed imported from Poland. There is a breed of wild cattle in a nobleman's park near Berwick upon Tweed, whose manners it is probable are such as they were before the subjection of its species to the power of man. When interrupted, the whole herd retreats for a certain space, and then returns in a semicircle towards the intruder; these operations they repeat, drawing nearer at every return, till it is no longer safe to remain within their reach. The cows hide their calves in some sequestered spot, going to suckle them two or three times a day. The Ox is perhaps the most useful servant of man; while living he performs the most laborious tasks of draught, while the cow furnishes us with milk, cheese, and butter: the dead animal provides us with beef, so important an article of food; its horns with various utensils, or, when boiled, with a semi-transparent substance, in some instances substituted for glass; their dung is useful as manure; glue is made of the cartilages, boiled in water till they become gelatinous, and then dried: the bone is employed instead of ivory; vellum is made from the skin of the calves. The blood is used for the making of Prussian blue, and in refining sugar; sadlers and others use a fine and very strong thread made from the sinews. The hair is serviceable in many manufactures; and the suet, fat, and tallow, are made into candles. The English butchers slaughter the ox in a very cruel manner, by blows on the head, and in this they persist in spite of the many efforts that have been made to abolish the custom.

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The Buffalo is a little larger than the ox,—and similar in form: his head is larger, and his horns differently shaped. The appearance of the Buffalo is disagreeable—having long and rough hair, which is of a dark brown.—It is a native of Asia and Africa, and is very furious.

Though these animals are chiefly found in the torrid zone, they are nevertheless bred in Europe, particularly in Italy; into which country they appear to have been introduced about the year 600. In Apulia, they are yet said to run wild, and to grow up to twice the size of our largest oxen.

Compared with the cow, the figure of the buffalo is more clumsy and awkward; its air is more savage, and it carries its head nearer to the ground; its limbs are less fleshy, nor is its tail so well covered with hair. The body is shorter and thicker, the legs higher, the head smaller, the horns more compressed, the skin more destitute of hair. The flesh also is less palatable, and the milk less nutritive, though yielded in sufficient abundance. In short, the hide, which is justly celebrated for its softness, thickness, and impenetrability, is the most valuable production of this animal.

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The Zebu is a native of Asia and parts of Africa,—is about the size of the cow, but more swift and hardy, and is used for conveying burdens.

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## THE KANGAROO

Is a native of New Holland, where it was first discovered by Sir Joseph Banks. Its head is small and taper, ears large and erect, upper lip divided, the end of the nose black, nostrils wide, lower jaw shorter than the upper, and there are whiskers on both; it likewise has strong hairs above and below the eyes; its head, neck and shoulders, are small; the lower parts of the body increasing in thickness to the rump; its tail is long, very thick near the rump, and taper; its fore feet are extremely short, and are mostly used in digging or bringing its food to its mouth; it moves altogether on its hind legs, making successive bounds of ten or twelve feet, with such rapidity, as to outstrip the fleetest grey-hound. In hopping forward the whole weight of the hinder part is supported by the tail. It springs from rock to rock, and leaps over bushes seven or eight feet high, with great ease; it has five toes on its fore feet, three on the hind, the middle one very long; the inner claw is divided down the middle into two parts.

The Kangaroo rests on its hind legs, which are hard, black, and naked on the under side. Its fur is short and soft, of a reddish ash colour, lighter on the lower parts.

## THE DOMESTIC CAT.

THIS animal is too well known to require any accurate description; it is the only one of its genus that has been taken under the protection of man, or made him the least return for his trouble by its services. The female goes with young fifty-six days, and brings forth five or six kittens at a time. They live till about the age of ten years.

The kitten is the most sportive of all animals, but as it grows up, it loses every amiable trait of character, and all the innate treachery of its kind becomes visible.—Though taught by education to disguise its propensities, it only waits for a favourable moment to throw off the mask, and to indulge its native rapacity. The cat has only the semblance of attachment; and the assiduity which it shows, is rather to gain favour, than a desire to afford pleasure. It hunts for birds, and many of the smaller kinds of animals; but is chiefly useful for clearing our houses of mice and rats. The mouse, indeed, seems to make its favourite meal, and its patient perseverance till the victim comes within its reach is the object of just admiration. It seizes its prey with a bound, and as it can see better in night than in the day, where its activity is equal to its powers, it is seldom in danger of perishing by famine.

This animal was the object of extraordinary veneration among the ancient Egyptians. "When the cat dies a natural death," said Herodotus, "all the people of the house shave their eye-brows, in testimony of sorrow: the animal is also embalmed, and nobly interred."—Among the Mahometans cats are esteemed as particular favourites; while dogs are the objects of their marked aversion.

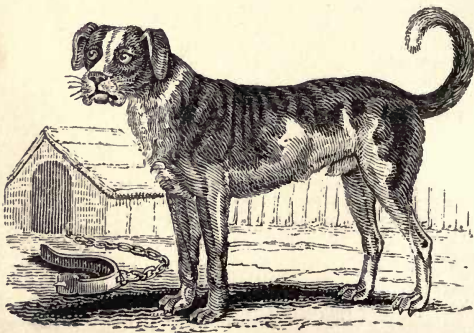
The following anecdotes will enable our readers more fully to judge of its peculiarities.

In Bingley's Animal Biography it is related that a gentleman possessed a dog and a cat, who not being able to agree, the former drove the latter away, and remained master of the field for several months afterwards, when he was poisoned by a servant. The cat, who had long kept watch in an adjoining roof, seeing her enemy laid lifeless before the door, descended, and, when all was quiet, ventured to approach. Having satisfied herself with her paw that he was lifeless, she immediately returned to her former habits and residence.





*Domestic Cat.*



*Mastiff.*

The following is a remarkable instance of maternal affection :—"A cat, one day in the spring, was frisking before a stable-door with her kittens, when a hawk, darting suddenly upon one of them, would have borne it off, had not the affectionate mother attacked the invader. A dreadful battle now commenced, in which the cat lost an eye, and the wing of the hawk was broken. The fight continued for some time after this, till puss, by a sudden effort, laid her enemy dead at her feet, and exultingly tore off the head of her foe."

"A physician of Lyons, in July, 1800, entered the chamber of a woman that had been murdered in that city: on the corner of a distant cupboard, in the same room, was mounted a large white cat, who sat with its eyes fixed on the corpse, and remained in the same position on the following morning, without being moved at the noise and clatter made by the officers of justice; but no sooner were the suspected persons brought in, than the creature's eyes glared, his hair bristled, he dashed into the middle of the room, gazed at them for a moment, and then retreated under the bed. The assassins were thus discovered."

"A pastry-cook in London had a cat which he found very mischievous among his pastry, and being tired with the repeated depredations of her tender foot breaking through the tops of his more tender patties, his interest got the better of his affection to puss, and he ordered his apprentice to tie her in a bag, and carry her half a mile from home, and then turn her loose in the street. The expedient did not succeed; the cat was at home as soon as the boy, though the experiment was often repeated, and the distance of her removal greatly extended! One day, upon seeing the cat unexpectedly return home, the poor pastry-cook (who had a cause of twenty years standing in the Court of Chancery) exclaimed, "Oh! that this cat were in the Court of Chancery; I am sure she would never get out of that place." The apprentice hearing his master's wish, and being a little provoked that his former attempts had failed, but quite ignorant of the wit of his master, instantly set off with the cat into Lincoln's-Inn Hall and turned her adrift. The cat, who found the court as full of lawyers as her master's shop was of tarts, ran like a mad thing from side to side of the court, and at length over the chancellor's lap; threw down his ink, disordered his notes, and created so much confusion in the court, that for a time it put a stop to all pleadings; till at



length the chancellor, with more warmth than became a man in his high station, (but he had a natural antipathy to cats) asked who had brought the cat amongst them? The poor boy, who had waited to see how puss conducted herself, was so terrified, that he thought it best to confess, and accordingly told the chancellor that his master had often sent him out to lose the cat, but that she constantly returned; and hearing his master say, that morning, if he could but get the cat into the Court of Chancery, he was sure she would never get out again, he had, in obedience to his master's wish, though not his orders, turned her out among them. The chancellor was a man of humour; and, upon inquiring the name of the pastry-cook, he found he was plaintiff in a cause of long standing, (*Paste against Puff*) which he immediately ordered to be set down for hearing; and it happened that he decreed in favour of Paste, though the whole council were unanimous for Puff."

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## THE MASTIFF.

BRITAIN was formerly so famous for this noble breed of dogs, that the Roman emperors maintained certain officers in this island, whose sole employment it was to train these animals for the combats of the amphitheatre.

Dr. Savius, who wrote in the reign of Queen Elizabeth, affirms, that three English mastiffs are a match for a bear, and four for a lion. From an experiment, however, made in the Tower by King James I. it was found, that a lion was an unequal match for only three of them; for, though two of the dogs were disabled in the conflict, the third put the lion to flight.

The Shepherd Dog is supposed to approach nearest to the original animal. It is used to protect the sheep, and will not only defend them, but keep them in order, and collect them into a flock. It is much stronger and larger in many parts of Europe than in England.

The numerous varieties of the dog species, are useful in divers ways to man. They assist him in hunting for the destruction of the beasts of prey, and the acquirement of those wild species which are good for food. They protect the flock of the shepherd, and the property of the peasant and citizen. They are watchful, faithful, capable of strong

and lasting attachment, and very intelligent. Their sense of smelling is very acute, enabling them not only to distinguish different animals and persons, but to follow the track of any one at a considerable distance. This faculty renders them peculiarly useful in hunting. The dogs of chase are distinguished by their different methods of discovering their prey, such as the pointer, the setter, &c.: some are suited to the chase of peculiar animals, as the terrier for the rat. The Hound is the strongest of the dogs of chase, particularly those species distinguished by the name of blood-hound, and the Irish greyhound.

The following anecdote is so truly humorous, that we cannot resist its insertion:—

“When Garrick first came upon the stage, and one very sultry evening, in the month of May, performed the character of Lear, he, in the first four acts, received the customary tokens of applause: at the conclusion of the fifth, when weeping over the body of Cordelia, every eye caught the soft infection, and the big round tear ran down every cheek:—at this interesting moment, to the astonishment of all present, his face assumed a new character, and his whole frame appeared agitated by a new passion; it was not tragic, for he was evidently endeavouring to suppress a laugh; in a few seconds the attendant nobles appeared to be affected in the same manner; and the beauteous Cordelia, who was reclined upon a crimson couch, opening her eyes to see what occasioned the interruption, leaped from her sofa, and, with the Majesty of England, the gallant Albany, and tough old Kent, ran laughing off the stage! The audience could not account for so strange a termination of a tragedy in any other way than by supposing the dramatis personæ were seized with a sudden frenzy; but their risibility had a different source.

“A fat Whitechapel butcher, seated on the centre of the first bench in the pit, was accompanied by his mastiff, who, being accustomed to sit on the seat with his master at home, naturally thought he might enjoy the same privilege here; the butcher sat quite back, and the quadruped finding a fair opening, got upon the bench, and fixing his fore paws on the rail of the orchestra, peered at the performers with as upright an head, and as grave an air, as the most sagacious critic of his day. Our corpulent slaughterman was made of melting stuff, and not being accustomed to play-house heat, found himself much oppressed by the weight of a large and well-powdered Sunday peruke, which, for the gratification of cooling and

wiping his head, he had pulled off and placed on the head of his mastiff; and the dog, being thus conspicuously situated, caught the eyes of Garric and of the other performers. A mastiff in a churchwarden's wig (for the butcher was a parish officer) was too much! it would have provoked laughter in Lear himself even at the moment of his greatest distress."

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### THE JERBOA.

THIS animal, remarkable for the singular construction of its legs, is found in Egypt, Barbary, and Palestine. It is somewhat less than a Rat; its head has a great resemblance to that of a Rabbit; its eyes are large and full; the fore legs only one inch in length, and are used as hands to convey victuals to its mouth; the hind legs are naked, and very much resemble those of a bird, having only three toes on each, the middle one longest; its tail is much longer than its body, and terminates with a black tuft, the tip of which is white; its hair is long and soft, of a reddish colour on the back; the under parts of the body are white; across the thighs there is a large black band, in the form of a crescent.

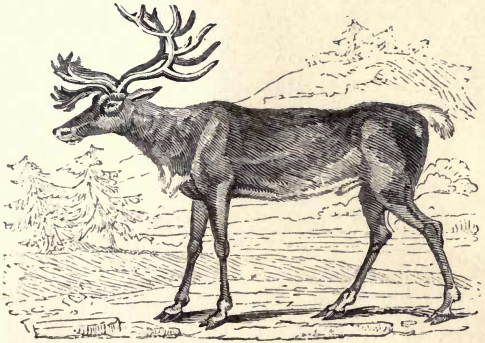
The motions of the Jerboa are similar to those of the Kangaroo. It goes forward very nimbly on its hind feet, taking leaps of five or six feet from the ground.

When pursued, it does not go straight forward, but turns here and there till it gains a burrow, where it quickly secretes itself. In leaping, it carries its tail stretched out; but in standing or walking, carries it in the form of an S, the lower part touching the ground.

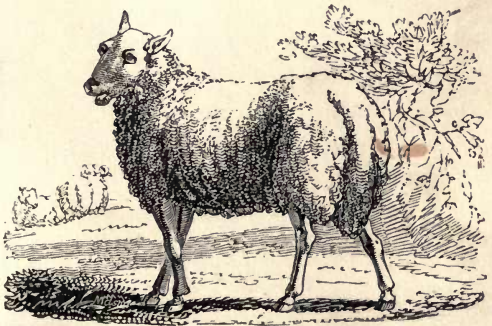
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### THE GREAT ANT-EATER

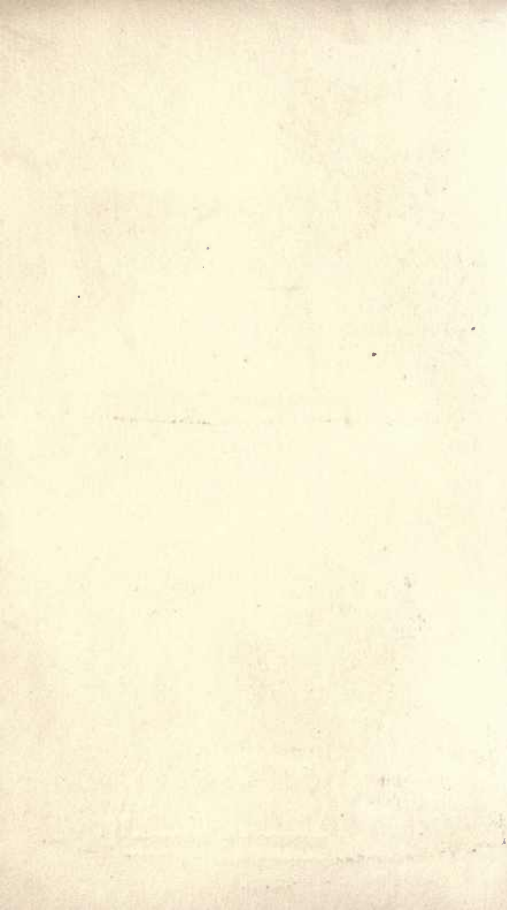
Is a native of Brazil and Guiana, and is nearly four feet in length. It runs slowly, frequently swims over rivers, lives wholly on ants, which it collects by thrusting its tongue into their holes, and having penetrated every part of the nest, withdraws it into its mouth loaded with prey.



*Rein Deer.*



*Sheep.*



## THE REIN DEER.

OF all the animals in the Arctic regions, the Rein Deer is the most useful, and the most worthy of our attention. It is found as near the Pole as man can penetrate; and, as if it were intended for the solace of the natives in the northern climates alone, it is incapable of existing under a more genial sky.

From the Rein Deer singly, the Greenlanders, the Laplanders, and other denizens of the north frigid zone, derive a supply for their most pressing wants. It answers the purpose of the horse in conveying them from one place to another; that of the cow in affording them milk, and that of the sheep in furnishing them with clothing; while the flesh serves for food, and the tendons for bow-strings; which last, when split, supply the want of thread.

The horns of the Rein Deer are very large, but slender, projecting forwards, and palmated towards the tops. The height of a full grown animal of this kind is about four feet and a half; it is very strongly built, has thick hair, and invariably a black space round the eyes. Its pace, which is rather a trot than a bounding motion, it will continue for a long time without apparent fatigue; particularly when yoked to a sledge on the snow.

A Laplander regards the Rein Deer as his principal source of wealth; some individuals possess a thousand head in a single herd. From the middle of May to the middle of October, the herdsmen drive the females to the cottages every morning and evening, to be milked, and afterwards conduct them back to pastures. In winter, however, they are left to shift for themselves, and chiefly subsist on a species of moss or lichen, which they instinctively discover and paw out from beneath the snow.

There is scarcely any part of this animal that is not converted to its peculiar uses. As soon as it begins to grow old, it is killed, and the flesh dried in the air. It is also sometimes hardened with smoke, and laid up for travelling provision, when the natives migrate from one part of the country to another. During the winter, the rein-deers are slaughtered as sheep with us; and every four persons in the family are allowed one rein-deer for their week's subsistence. In spring, they spare the herd as much as they can, and live upon fresh fish. In summer,

the milk and curd of the rein-deer make their chief provision; and, in autumn, they live wholly upon fowls, which they kill with a cross-bow, or catch in snares. Nor is this so scanty an allowance; since, at that time, the sea-fowls come in such abundance, that their ponds and springs are covered over. These are not so shy as with us, but yield themselves an easy prey. They are chiefly allured to those places by the swarms of knats which infest the country during summer, and now repay the former inconveniencies, by inviting such number of birds as supply the natives with food a fourth part of the year, in great abundance.

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### THE SHEEP,

In its present domestic state, is at once the most useful, and the most defenceless, of animals. Destitute of every quality necessary for self-preservation, they endeavour to fly without swiftness, and to oppose without courage or strength. These feeble efforts only serve to provoke the insults of their enemies; the dog pursues the flock with increased delight on seeing them fly, and attacks them with less fear, not suspecting any attempts at resistance. In short, the sheep derives its whole safety from man; and must now rely on that art for protection, to which it originally owed its degradation.

In its servile state, the sheep is not only void of all means of defence, but it appears the most innocent and stupid of all animals. Its physiognomy indicates no traits of cunning or courage, of attachment or reserve. The better it is fed, the more dull and sluggish it becomes; and in fact, all the changes that have been effected on this animal, and all the pains that are taken with it, tend as much, or more, to the benefit of man, than to its own.

In many parts of the Alps, however, and in some provinces of France, where the sheep are penned every night to secure them from the wolf, they evince a degree of docility and obedience to their keeper. When the sun declines, he sounds his pipe, and they follow him, apparently pleased with his pastoral music; thus realizing,



in some measure, the high wrought accounts of ancient Arcadian scenes, on which the sensible mind cannot dwell without some degree of enthusiastic pleasure.

Besides its hardiness in enduring great severities of weather, the natural instinct of the Sheep, in foreseeing the approach of a storm, is no less remarkable: in their endeavours to secure themselves under the shelter of some hill, whole flocks have frequently been buried for many days under a covering of snow, and have afterwards been taken out without any material injury. Thus beautifully described by Thompson.

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“Oft the whirlwind’s wing,  
Sweeps up the burthen of whole wintry plains,  
At one wide waft; and o’er the hapless flocks,  
Hid in the hollow of two neighbouring hills,  
The billowy tempest whelms.”

It does not appear that the culture of sheep was much attended to among our ancestors, the Britons; but by persevering efforts, during a long succession of ages, the breed is now brought to the highest perfection in this island; and, except in the fineness of their fleeces, in which we are excelled by the Spanish sheep, in consequence of their milder climate and more suitable pasturage, no country is more famous for this valuable race of animals than our own. We have, indeed, several varieties, one distinguished by its size, another by the fineness of its wool, and a third for the delicacy of its flesh. Not only the grand divisions of the island, but almost every country has a peculiar variety; the judicious intermixture of which is at once beneficial to the breeder and the public.

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## THE OPOSSUM

Is a slow, helpless animal, when on the ground; but climbs trees with great ease and quickness; sometimes conceals itself among the branches, and surprises the birds that come within its reach. By means of its tail it flings itself from one tree to another. It feeds on birds, reptiles, insects, roots, leaves, and bark of trees.

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## THE SQUIRREL.

THIS beautiful little animal is equally admirable for the neatness and elegance of its formation, as for its liveliness and activity. Its disposition is gentle and harmless. Though naturally wild, it is soon familiarized to confinement and restraint; and though excessively timid, it is easily taught to receive with freedom the most familiar caresses from the hand that feeds it.

It usually lives in woods, and makes its nest of moss or dry leaves in the hollows of trees. It seldom descends upon the ground, but leaps from tree to tree with great agility.

Its food consists of fruits, almonds, nuts, acorns, &c.; of which it accumulates great stores for winter provision, and secures them carefully near its nest. In the summer it feeds on buds and young shoots, and is particularly fond of the cones of the fir and pine trees.

The Squirrel is of a bright brown colour, inclining to red; the breast and belly are white; the ears are ornamented with long tufts of hair; the eyes are large, black, and lively; the fore teeth strong and sharp; the fore legs are curiously furnished with long stiff hairs, which project on each side like whiskers. When it eats, it sits erect, and uses its fore feet as hands to convey food to its mouth.

The tail of the Squirrel is its greatest ornament, and serves as a defence from the cold, being large enough to cover the whole body; it likewise assists it in taking leaps from one tree to another; and we may add a third application of it, which would seem altogether improbable, were we not assured of it by Linnæus and other naturalists:—In attempting to cross a lake or river, the Squirrel places itself upon a piece of bark; and erecting its tail to catch the wind, boldly commits itself to the mercy of the waves. The smallest gust of wind is sufficient to upset a whole navy of these little adventurers; and in such perilous voyages many hundreds of them are said to perish.

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## THE GREY SQUIRREL.

THE Grey Squirrel is an inhabitant of North America, where from its great numbers, it is very troublesome. Its skin is used for ladies' shoes, and its fur for purposes of dress.

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## THE STRIPED SQUIRREL.

THE Striped Squirrel is found in the northern parts of Asia and America, and very rarely in Europe. Its length is about five inches and a half, the tail is rather longer. Its colour on the upper parts is reddish brown, on the lower white; on the back are three black stripes including a space of a pale yellow tinge.

The Striped Squirrels differ very much from the others of the tribe, in having the habits of the torpid animals. It sleeps most of the winter in burrows well stored with a provision of acorns, nuts, grain, &c.: if these should fail, the animals sally forth in quest of more, and will enter granaries, and even houses. The Striped Squirrel is furnished with pouched cheeks, and is so great an epicure, that, after having filled them, he will throw out their contents to replace them with food of a superior quality with which it may happen to meet. Its fur forms an article of commerce, but has more beauty than strength. The skins are chiefly sold to the Chinese.

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## THE FLYING SQUIRREL.

OF the Flying Squirrels, only one species has yet been discovered in Europe; it is chiefly an inhabitant of the northern regions, such as Lapland, Finland, &c.; and even there it is rare; it is common in many parts of Asia. It is smaller than a common squirrel, measuring about six inches and a quarter. The Flying Squirrel springs to a great distance, by means of a furry membrane which

extends between the fore and hind legs : to support this, the thumb of the fore feet is extended to a considerable length into the membrane. The upper parts of the body are of an elegant pale grey, and the under milk white. The manners of this animal resemble those of the common squirrel ; it is however of solitary habits. It builds its nest of the finest mosses, and the female pays great attention to her young, which are at first very helpless. The Flying Squirrel will spring as much as twenty fathoms, always directing its flight slightly downwards, generally from the top of one tree to the middle of another. It remains during winter in its nest, but does not become torpid. It seldom or ever descends to the surface of the ground, and indeed cannot move comfortably when there.

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### THE VIRGINIAN FLYING SQUIRREL.

THIS is an animal of great beauty. It is smaller than the preceding species, of an elegant pale brown above, and yellowish white beneath. The flying membrane is dark towards the edge, which is white. It is often kept tame, is easily familiarized, and fed with nuts, almonds, walnuts, and other fruits. It is a gregarious animal, living several together, in nests built in the hollows of trees. These animals constantly inhabit the upper parts of the trees : they can swim if necessary, and leap quite well immediately on leaving the water.

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### THE OTTER.

THE common Otter is found in almost every part of Europe, and in the colder countries of Asia. It feeds principally on fish, on which account it inhabits the banks of rivers. It is found in the northern parts of America, especially in Canada, where it grows to a larger size than in Europe. The Otter is about two feet in length, with a tail sixteen inches long : the colour is a deep brown, with a small light patch on each side of the nose and under the chin : the throat and breast are ash coloured : the head is broad and flat, the ears short and rounded, the eyes small,

and placed near the nose, the mouth small, the teeth strong, the lips thick and muscular : the neck is thick, the legs short and stout, so loosely joined to the body, that they can be brought upon a level with it and used as fins : the toes are five in number, the webs strong and broad, and the whole foot naked. The Otter shows great sagacity in forming its habitation ; its entrance is always under water, whence it burrows upwards, forming as it goes different lodges, as resources in times of flood ; in the uppermost, is a small opening for the admission of air ; it is also observed, that the animal is so cautious as to place even this little hole under some large bush. The Otter is naturally a fierce animal, and will inflict severe wounds on the dogs who hunt it. It will eat birds and small quadrupeds, when fish is scarce. The Otter can be tamed and used to catch fish ; these, in its natural state, it drags out of the water and leaves, after devouring the head and upper parts. It will sometimes devour vegetables, and gnaw the bark and twigs of young trees.

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### THE MOLE.

The form of the Common Mole is perfectly well adapted to its peculiar habits. The body is thick and cylindrical the snout very strong : there is no appearance of neck : the legs are so short as scarcely to project from the body. The fore feet are turned outwards, and furnished with very strong claws, so as to give the animal the power of easily working its way under ground. The hind feet are small in proportion to the fore feet, and are adapted to throwing back the mould which the animal loosens : the skin is very tough, and the fur surpasses all other in fineness. The eyes of the Mole are so very small, that they seem intended rather to warn it of danger, by making it aware of its approach to light, than to serve for sight, of which it has no need, living always underground. The Mole is nearly six inches long, and of great strength considering its size. It is said to possess an exquisite sense of hearing, and to be very easily conscious of danger. When first taken, it utters a shrill cry, and attempts to defend itself. The male and female Mole are said to bear to each other so strong an attachment, as to forego all other society,

living quietly in their holes, and finding plenty of food without going abroad. It is said to feed not only on worms, but on the roots of vegetables, preferring, however, animal food. It shows, under peculiar circumstances, a fierce and voracious disposition. It is difficult to keep Moles alive in confinement, it being necessary to furnish them with a constant supply of damp mould. The Mole, like all other black animals, is sometimes found white. The mole contrives a curious and convenient nest for her four or five young ones, forming it of the roots and fibres of plants, so that it is impenetrable to water, there are passages leading from it to admit of the animals going in quest of prey; the place of these nests may be known from the mole hills which are formed over it of the loose earth thrown up behind the animal. The greatest evil to which Moles are exposed arise from floods, when numbers are drowned, in spite of their powers of swimming. Moles are not known in Ireland. In Siberia they attain a very large size. Their beautiful fur is useless from the difficulty there is in preparing it for service. There are some varieties of this species which differ in colour, &c.

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### THE SHREW.

The common Shrew is perhaps the smallest of the European quadrupeds; being about two inches and a half long. Its general appearance is like that of a mouse, but it is distinguished by its long and slender snout. It lives in fields and gardens, and eats roots, grain, insects, and other animal substance. It has a strong and unpleasant smell, so that cats will not eat it. It appears that a great number of these little animals die in the autumn, they being found dead at that time, about the paths in fields and gardens. It breeds in holes among moss, under banks, and is said to bring forth several young at a time. The colour is rather redder than that of a mouse. It is found in all parts of Europe, in Siberia, and Kamschatka.

The radiated Shrew is a very curious animal with a long snout ending in soft distinct processes, resembling the form of a spur. It is a native of Canada, and resembles a mouse in form and agility. Its tail is three inches long, knotty and almost naked, narrowing very much towards the end. There are several other species of the Shrew genus, one of which, the Pigmy Shrew, is the smallest of quadrupeds, weighing only half a dram.



## THE COMMON BOAR

Is, of all other domestic quadrupeds, the most filthy and impure. Its form is clumsy and disgusting, and its appetite gluttonous and excessive. In no instance has nature more conspicuously shown her economy than in this race of animals, whose stomachs are fitted to receive nutriment from a variety of things that would be otherwise wasted: the refuse of the field, the garden, the barn, or the kitchen, affords them a luxuriant repast.

The parts of this animal are finely adapted to its mode of living. Nature has given it a form more prone than that of other animals. Its neck is strong and brawny; its snout is long and callous, well calculated for the purpose of turning up the earth for roots of various kinds, of which it is extremely fond; it has a quick sense of smelling, by which it is enabled to trace out its food. It is naturally stupid, inactive, and drowsy; much inclined to increase in fat, which is disposed in a different manner from that of other animals, and forms a thick and regular coat between the flesh and the skin. It is restless at a change of weather; and during certain high winds, is so agitated, as to run violently, screaming horribly at the same time. It appears to foresee the approach of bad weather, as it previously carries straw in his mouth to its sty, prepares a bed, and seems endeavouring to hide itself from the impending storm.

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## THE HEDGE-HOG.

Few animals are more innoxious than the Hedge-hog; yet few are exposed to such various injuries and insults. Children frequently learn the rudiments of cruelty in torturing it, and it seldom finds a protector among those who are more advanced in years.

Though the Hedge-hog has a formidable appearance from the sharp spires with which its upper parts are covered, it is one of the most harmless creatures in the universe. Incapable or unwilling to injure, all its precautions are directed only to its own security; its armour is adapted not to invade, but to repel an enemy. While



other animals trust to their force, their cunning, or their swiftness, the Hedge-hog, destitute of all these, has but one expedient for its protection: as soon as it perceives itself attacked, it draws back and concentrates all its vulnerable parts, rolls itself into a kind of ball, and presents nothing but its prickles to the foe; and thus, while it refrains from attempting to injure any other quadruped, it renders itself proof against the annoyance of most creatures, except man. The enraged dog may bark, and roll it along with his paws; it still patiently submits to every provocation, in order to remain secure.

Like most other wild animals, the Hedge-hog spends the greatest part of the day in sleep, and forages for worms, insects, and other petty spoil, principally in the night. It prefers small thickets, hedges, and bushy ditches, for its retreat, where it makes a hole about six or eight inches deep, and lines it with moss, grass, or leaves. It sleeps during winter, and, at all seasons, is satisfied with a small quantity of food. The flesh, by some, is esteemed very delicate eating; but it is only epicures of a peculiar taste who make the experiment.

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## THE STAG, OR RED DEER.

THIS is a species of Deer with long upright horns much branched; and slender, sharp brow antlers. The colour is generally of a reddish brown, with some black about the face, and a black list down the hind part of the neck, and between the shoulders. This quadruped is common to the northern parts of every quarter of the globe, and is pretty generally diffused over Europe. It is one of those mild, tranquil, and innocent animals, which seem created to adorn and animate the solitude of the forest, and to occupy, remote from the visits of man, the peaceful retreats of nature. Like the rest of the Deer kind, the stag sheds its horns annually; whence that useful volatile spirit, called hartshorn, is obtained. The hind, or female, goes with young somewhat more than eight months. As the flesh is not much esteemed, they are seldom taken under

the immediate protection of man, like the fallow Deer, but are left to range in forests and chaces; where they furnish diversion to hunters of the first order. The stag is supposed to live about forty years. He has good eyes, an exquisite smell, and a quick sense of hearing. He appears fond of music, and shews no particular dread of man, unless when attended by dogs, or furnished with arms; against dogs, he will sometimes make head with peculiar resolution. Indeed, his intrepidity on emergencies is very great: William, duke of Cumberland, having caused a tiger and a stag to be inclosed in the same area, the latter made such a bold defence that the savage tiger was obliged to fly.

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### THE FALLOW-DEER.

THE Fallow-Deer, the male of which is called a buck, and the female a doe, is a well known animal, and is kept in parks to serve the purposes of pleasure and luxury. Having undergone a species of domestication, it varies very much in colour; and climate and food have every sensible effect on its size, and the flavour of its flesh.

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### THE MOOSE—OR ELK.

THE Moose is the largest of the deer kind, but by no means so handsome in his form as the other species of deer—having long and heavy horns, large head, short neck, and very long legs. It is found in North America.

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## THE PORCUPINE.

THE common Porcupine is about two feet long, and fifteen inches broad: it has a long crest on the back of its head, composed of stiff bristles, reclining backwards; the body is covered with quills from ten to fourteen inches long, sharp pointed, and thickest in the middle, and these are varied with black and white; between them a few hairs are interspersed. The head, belly, and legs, are covered with strong bristles, terminated with dusky colored hair, the whiskers are long, the ears resemble the human, as the nose does that of the hare. There are four toes before, and five behind; and the tail, which is short, is covered with bristles.

The quills of the Porcupine, which appears to be given it rather for defence than annoyance, naturally recline backwards: but when irritated, it erects them, and opposes an almost unapproachable wood of lances, against every assailant. It has been said that it can hurl or project them like a dart against a foe; but this is no more probable than that an enraged turkey-cock should have the power to dart his feathers.

This animal, according to some, lives on roots, fruits, and vegetables, while others affirm that it hunts for serpents and other reptiles for its subsistence; there is some reason to believe this last, or, perhaps, both the facts are true.

The Porcupine is a native of many parts of Asia, and of Africa, in general; and it is even found wild in Italy, though but scarce in Europe. It is a dull and torpid creature, voracious, though capable of great abstinence; and has received the epithet of fretful from its bristling up its quills on the slightest appearance of danger. There are three other species known, one a native of Brazil, the second of Canada, and the third of the Indian Archipelago; in every essential feature, however, they agree with the animal which we have just described.

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*Porcupine.*



*Rat.*



## THE RAT.

THIS is amongst the most pernicious of all the smaller quadrupeds, nor can all the art of man exterminate the race. Not only our food, our drink, our clothes, and our furniture are a prey to it; but it makes dreadful havoc among young poultry, rabbits, and game. It can penetrate the hardest wood and the most solid mortar; and no care or ingenuity can wholly exempt us from its depredations. Yet the cat, the weasel, and the dog, unite themselves with the human race in thinning its numbers; it finds means, however, to elude their united efforts, and still remains a most formidable annoyance. Its bite is not only severe but dangerous: and its resolution, reinforced by its disgusting appearance, renders it not only the object of aversion, but of terror to many. The harmless Mouse pleases more than it alarms by its intrusions; but there are few who do not feel a sort of antipathy to a rat, and even shun it as they would shun a snake.

The water-rat, which is a different species from the domestic, chiefly subsists on frogs, small fish, roots, and insects, and itself becomes sometimes the prey of the pike.

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THE SLOTH,

Of all animals, is the most sluggish and inactive; and if we were to judge from outward appearance, would seem the most helpless and wretched. All its motions seem to be the effect of the most painful exertion, which hunger alone is capable of exciting.

It lives chiefly in trees; and having ascended one, with infinite labour and difficulty, it remains there till it has entirely stripped it of all its verdure, sparing neither fruit, blossom, nor leaf; after which it is said to devour even the bark. Being unable to descend, it throws itself on the ground, and continues at the bottom of the tree till hunger again compels it to renew its toils in search of subsistence.

Its motions are accompanied with a most piteous and lamentable cry, which terrifies even beasts of prey, and proves its best defence.

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## THE GOAT.

Some have supposed that the common goat derived its stock from the Caucasian, others from the common ibex. This latter is much larger, stronger, and more active than the common goat : its horns are sometimes three feet long, of a brown colour, and knotted on the upper surface ; the hair is a greyish brown, paler underneath ; the limbs are blackish ; the tail short ; the head brown. The female is smaller, and her horns are less in proportion. This animal delights in climbing precipices, hanging over the steepest rocks, and leaping from crag to crag.

The Domestic Goat is found in almost every part of our globe, enduring the extremities of cold and heat, and differing in size, according to circumstances. The animal was unknown to the Americans previous to its introduction from Europe. The Goat very much resembles the sheep, but is more active, sagacious, and docile. It is capable of being tamed, and becomes attached to those about it. The Goat delights in mountainous regions, where it feeds on the most elevated pastures : it always takes the lead when herded with sheep : it is a robust animal, easily nourished and uninjured by any changes of the weather, excepting very severe cold : it is active and capricious, wandering about without any apparent object. The flesh of the kid is much esteemed ; its skin, as well as that of the old animal, is used as leather for gloves. It is remarkable for its readiness to take a dye, and was formerly embellished with gold, silver, and brilliant colours, and used as hangings for the apartments of the opulent. The milk is said to be better than that of the sheep : it affords little cream, but makes good cheese. The females will allow themselves to be sucked by the young of other animals, and even by infants. The colour of the domestic goat varies, being black, brown, white or spotted. The goats of Wales are said to be the finest ; they are white, and very serviceable to the inhabitants, who use their milk for cheese, and salt their flesh as bacon for winter use. The Goat has a strong and offensive smell, which is particularly displeasing in the months of September and October ; this odour is supposed to be beneficial to horses, on which account some persons keep a he-goat in their stables.

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## THE ANGORA GOAT

Is a very beautiful variety, deriving its name from the place where it is found, which is a small district of Asia Minor, not far from Smyrna, producing peculiar breeds of goats, sheep, cats, and rabbits, &c., with hair of uncommon length and fineness. From the hair of the goats are manufactured the finest camlets. The goatherds take great care to preserve this valuable hair in all its beauty.

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## THE IBEX.

THIS creature, which is a native of the Carpathian and Pyrenean mountains, the country of the Grisons, the Rhætian Alps, and various districts of Asia, has large knotted horns, reclining backwards, and sometimes three feet in length; a small head, full eyes, and rough hair. The colour is a deep brown mixed with some hoary; and the male has a dusky beard.

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## THE WEASEL.

THIS animal seldom exceeds six or seven inches in length, while the legs are not more than an inch and a half. The head, tail, legs, feet, and the upper part of the body, are of a pale tawny-brown colour, but the lower parts are white.

Though diminutive in size, the Weasel is nevertheless a formidable enemy to many animals greatly its superior in that respect. It is very destructive to rabbits, poultry, and young birds; but, as some counterbalance for the depredations which it commits on useful animals, it also destroys many that are noxious.

No arts can reclaim this creature. Though sometimes confined in a cage for amusement or inspection, it resolutely abstains from food while any person is in sight.

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## THE SEAL.

THIS animal resembles a quadruped in some respects, and a fish in others. The head is round, and the nose broad, with oblong nostrils and large sparkling black eyes; it has no proper external ears, but there are two apertures which answer the same purpose. The body is thickest at the junction of the neck; and thence goes tapering towards the tail, and is covered with thick bristly shining hair of various shades. The feet are of singular conformation; and, were it not for the claws with which they are armed, might well be taken for fins; and they actually do assist the animal in swimming, by means of their connecting webs.

The ordinary length of the Seal is from about five to six feet. It is found in every quarter of the globe, but chiefly towards the southern and northern regions. It swarms near the Arctic circle, and the lower parts of South America, in both oceans; it generally lives in the water, where it subsists on fish. Sometimes, however, it ventures ashore, and basks on the rocks; but, the instant it is disturbed, it plunges to the bottom.







*Golden Eagle.*



*Secretary Falcon.*

## THE GOLDEN EAGLE.

BIRDS of the Eagle kind, of which there are several distinct species, in the Linnæan arrangement, belong to the genus *falco*. They generally fix their retreats remote from the habitations of men, choosing rather to prey on the wild game of the forest (thus earning a precarious subsistence), than to sacrifice their safety to their appetites.

The Eagle is among birds what the lion is among quadrupeds: they both exercise a kind of sovereignty over their fellows of the forest; equally magnanimous, they disdain all petty plunder, and pursue only such animals as are worthy of conquest. The Eagle will not share the spoils of another bird; and rejects what it has not acquired by its own industry and prowess. However craving his appetites, he never stoops to feed on carrion; and when once satiated, never returns a second time to satisfy his hunger on the same carcase. He is proud, and indignant under restraint; yet is capable with kind usage of being tamed, and has been known to evince no small share of attachment to his keeper.

The Eagle soars the highest of all the feathered tribe, and hence has been emphatically denominated the bird of heaven: his eye is so strong that he can look undazzled on the sun; but his sense of smelling is much inferior to that of the vulture. Though very vigorous when on the wing, he finds some difficulty in rising after a descent; but yet will, with facility, carry off a goose, a hare, a lamb, or any other animal equally large. Even infants have, at times, fallen victims to his rapacity; a circumstance, the observation of which probably gave rise to the fable of Ganymede having been snatched up to heaven by an Eagle.

The GOLDEN EAGLE is the noblest and largest of the Eagle kind, being about three feet long, and the expansion of its wings upwards of seven feet. The head and neck are covered with narrow, sharp-pointed, dark-brown feathers, edged with tawny; the whole body is a dark brown, the plumage on the back being delightfully shaded with a deeper tinge of the same colour. The legs are feathered down to the very feet, and the toes are armed with formidable claws.

This species is found in the mountainous parts of Ireland, and generally breeds in the loftiest cliffs.

## THE SECRETARY FALCON.

THIS curious bird resembles the common falcon in its head, bill, and claws; but its legs are so long, that, when standing erect, it is not much unlike the crane. The general colour of the plumage is a bluish ash; the tip of the wings, the thighs, and the vent, inclining to black. On the back of the head are several long dark coloured feathers hanging down behind, and capable of being erected at pleasure.

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## THE JER-FALCON.

THIS is a very elegant species, and is larger than the Goshawk. Its bill is much hooked, and yellow; the iris is dusty; the throat white, as is likewise the general colour of the plumage, but spotted with brown; the breast and belly are marked with lines, pointing downwards; the spots on the back and wings are larger: the feathers on the thighs are very long, and of a pure white; those of the tail are barred: the legs are of a pale blue, and feathered below the knee. This bird is a native of the cold and dreary climate of the north, and is found in Russia, Norway, and Iceland; it is never seen in warm, and seldom in temperate climates; it is found, but rarely, in Scotland, and the Orkneys.

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## THE GENTIL-FALCON.

THIS bird is somewhat larger than the Goshawk. Its bill is of a lead colour; cere and irides yellow; the head and back part of the neck are rusty, streaked with black; the back and wings are brown; scapulars tipped with rusty; the quills dusky, the outer webs barred with black; the lower part of the inner webs marked with white; the tail is long, and marked with alternate bars of black and ash colour, and tipped with white: the legs are yellow and the claws black: the wings extend exactly to the tip of the tail.

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## THE OSPREY.

THE length of this bird is two feet; its breadth, from tip to tip, about five: its bill is black, with a blue cere, and its eye yellow: the crown of its head is white, marked with oblong dusky spots; its cheeks, and all the under parts of its body are white, slightly spotted with brown on its breast, from the corner of each eye a streak of brown extends down the sides of the neck towards the wing; the upper part of the body is brown: the two middle feathers of the tail are the same; the others are marked on the inner webs with alternate bars of brown and white; the legs are very short and thick, being only two inches and a quarter long, and two inches in circumference; they are of a pale blue colour, the claws black, the outer toe is larger than the inner one, and turns easily backward, by which means this bird can more readily secure its slippery prey.

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## THE ORIOLE.

Almost all the species of this numerous genus are natives of America. They feed on fruits, grains, and insects: are of a noisy disposition, and are remarkable for the structure of their nests, which some suspend from a branch, and others sew to the under surface of a very large leaf. Some are gregarious, and many very beautiful.

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## THE GOLDEN ORIOLE

Is one of the most beautiful of the European birds, inhabiting, during summer, many parts of the continent, and sometimes visiting our own country. Its colour is a fine golden yellow, excepting the wings and tail, which are black. The nest is suspended by its rim between the forked branches of a tree, and is composed of interwoven straws and grass, lined first with mosses and lichens, and then with the silken chrysalis bags of moths, the egg-bags of spiders, feathers, &c. The parents are very assiduous



in the care of their young. This bird is in some places considered a delicate article of food. It is migratory.

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### THE PARADISE GRAKLES,

A native of India and the Philippine Islands, is somewhat larger than a blackbird. Its colour is a chesnut brown, the head and neck black: the abdomen white. This bird is said to be voracious, and is particularly fond of locusts. When the Island of Bourbon was overrun with the latter, this Grakle was introduced to get rid of them, and with success. It is of a lively and imitative disposition, and when young may be taught to articulate. If kept in a farm yard, it will imitate the noises of the different animals, with strange gesticulations.

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### THE SPARROW HAWK.

LIKE other birds of the Hawk kind, this species varies greatly in its colours; but it is too well known to require a very particular description. The male and female differ considerably in size, as well as in tints; the length of the former being about twelve inches, and the expansion of the wings twenty three; while the length of the latter is fifteen inches, and the expansion of the wings twenty six.

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### THE GOS HAWK.

THIS bird is larger than the common Buzzard, and of a larger and more elegant conformation. The skin at the base of the bill has a yellowish green colour; over each eye is a long white line, and on each side of the neck, a bed of broken white. The head, the hind part of the neck, the back, and the wings, are of a deep brown colour; the breast and belly are white, beautifully marked with transverse bars of black. The tail is long, and of a brownish ash colour, marked with dusky bars.

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*Eagle.*



*Frigate Pelican.*

## THE COMMON EAGLE.

THE common Eagle is of a brown colour; the head and the upper part of the neck incline to red; the feathers of the tail are white, except towards their extremities where they are blackish, and the legs are clothed with a reddish brown plumage. This species is found in the northern parts of England, and Scotland, and in other countries. They build their nests upon inaccessible cliffs; and the female seldom lays more than two or three eggs, on which she sits thirty days before they are hatched.

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## THE SEA EAGLE.

THESE birds are found in several parts of Great Britain and Ireland: they have generally been confounded with the golden eagle, from the great similarity in their colours; but the sea eagle may be easily distinguished by the nakedness of its legs, and more so by its peculiar habits. It is generally allowed to derive its subsistence from the watery element; darting down on fish as they sportively swim near the surface, with enerring aim, from a very considerable height above.

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## THE IMPERIAL EAGLE

Is a native of South America. Its body measures three feet and a half, from the tip of the beak to the end of the tail. Its colours are black above, and whitish below, with variegations of grey. It is a bold and ferocious bird, preying on fawns, sloths, and other animals.

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## THE ROYAL EAGLE

Is about double the size of the common eagles. It is an inhabitant of South America. Its form is grand and elegant; its colours brown, black, and white, finely dis-

posed. Its flight is majestic, and so rapid, that the stroke of the wings will sometimes kill the prey, before the eagle has touched it with its claws. It is so strong as easily to tear in pieces the largest sheep, and to pursue the wild as well as tame beasts; it will even attack man; it feeds principally on monkeys, which it kills and devours with great voracity. It generally resides in lofty mountains, where it is said to build its nest of the bones of the animals it has eaten. It is chiefly found on the banks of the river Amazon.

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### THE RING-TAILED EAGLE

Is of a very dark brown colour; the upper half of the base of the tail is white. The skin of the beak and the legs are yellow. It measures three feet in length, and upwards of seven in breadth. It is a native both of Europe and North America. In these islands it is most common in Scotland where it commits great havoc amongst the smaller animals, seizing even roebucks. The parents build a nest of large sticks, lined with rushes and heath; they feed their young very diligently till they are able to leave the eyry. The egrets are fed on the choicest food, all sorts of wild game and domestic poultry.

Several instances are recorded of children being seized and carried off by eagles to their young:—

In Norway, a boy, somewhat more than two years old, was going from the house to his parents, who were at work in a field at no great distance, when an eagle pounced upon the little unfortunate, and, to the unutterable grief of his disconsolate parents, flew off with him in their sight!

Anderson, in his History of Iceland, says, that in that island children of four or five years of age have been sometimes taken away by the eagles; and Ray observes, that in one of the Orknies a child of a year old was seized by the talons of an eagle, and carried above four miles to its nest; but the mother, knowing the place, pursued the rapacious bird, found the child in the nest, and saved it uninjured!

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## THE FRIGATE PELICAN,

Has a body of the size of that of the fowl, while its extending wings measure fourteen feet. The bill is dusky; the head, pouch, and legs, red; the pouch very bright; the plumage is browning black, except the wing-coverts, which have a yellowish tinge; the tail is long, and much forked. The female wants the pouch, and is white beneath. The Frigate Bird is seldom seen but on the wing, and is never known to sit on the surface of the water, like other marine birds; it perches sometimes on the top-mast of large vessels, and frequently is seen hovering round them. The power of its extensive wings must be very great: it is seen more than two hundred leagues from land, and often rises out of sight. It dives for its prey from a great height, and remounts as rapidly as it descends: it will attack gulls and other birds, with fish in their bills, and forcing them to quit their hold, seize the prey as it falls to the water. The Frigate Bird is a great enemy to the flying-fish, which it catches as it rises from the water. It is found almost exclusively within the tropics; it builds on trees near the coast, or on rocks; it lays one or two eggs, flesh coloured, marked with crimson.

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## THE CORVORANT, OR CORMORANT,

Is about the size of a goose, but more slender. The bill is dusky; the pouch small, and yellowish green; the top of the head and part of the neck are black, with perpendicular lines of white; the throat is white; the lower parts greenish black, with a patch of white on the thighs; the back, scapulars, and wing-covers brownish, glossed with green and purple; the quills and tails dusky black. The Corvorant is found in most parts of the world; and is very voracious, and feeds on fish. In China, the Corvorant is trained to catch fish: a ring placed round its neck prevents its swallowing, and obliges it to give up its prey to its master. It is said that Corvorants were formerly applied to the same purpose in England. The Corvorant builds on the top of crags; its eggs are three or more in number, of a pale green colour, and so fœtid, that even

the Greenlanders will scarcely eat them. It is generally a wary bird; but when gorged with eating, is easily caught. The skin is very tough, and used by the Greenlanders for making garments; they also sometimes eat the flesh.

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## THE CONDOR.

THIS is the largest bird of the vulture kind; and for magnitude, strength, and rapacity, is without a rival among the winged tribes. It is formidable not only to animals, but sometimes to man himself. According to some authors, the expansion of its wing is eighteen feet; the beak is strong, and sharp enough to perforate the body of a cow; and two of these creatures will devour an ox at a single repast.

Indeed, the Condor shows no signs of alarm at the approach of man: through the benignity of Providence there are but few of the species, or the consequences might be dreadful. If we may credit the testimony of the Indians of South America, where only the Condor is found, it will carry off a deer, or a young calf in his talons, as easily as an eagle carries off a hare or a rabbit. It seldom frequents the forest, as it requires a large space for the display of its wings; but it is sometimes seen on the sea shore, and the banks of rivers; whither it descends at certain seasons from the heights of the mountains, or the deserts, which are, for the most part, peopled by the monstrous births of nature. In those wild regions every thing inspires a latent horror: broken precipices,—prowling panthers,—forests only vocal with the lisping of serpents,—and mountains of the most forbidding aspect, rendered still more terrific by being the haunt or retreat of the Condor.

The colour of this bird is brown. One of its feathers is nearly two feet and a half in length; and, in the largest parts, an inch and a half in circumference.

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## THE KING OF THE VULTURES.

THIS bird is larger than a raven, and is very common in the warm parts of America. It lives on filth and putrid





*King of the Vultures.*



*Owl.*



flesh, and is so useful in clearing away offensive substances, as to be protected by law in the southern cities. They are foul birds, and exceeding voracious, and sometimes gorge food in such a manner as to be unable to fly. They breed in solitary swamps, making their nests on decayed trunks of trees and excavated stumps. If a person takes one of their young ones in his hands, he immediately vomits forth such abominable matter, as soon to drive the intruder away. The old birds, when caught, drive off their enemy in a similar way.

The black Vulture is also common in the tropical regions of America.

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### THE OWL.

The Owl is distinguished, among birds of the rapacious kind, by peculiar and striking characters ; its outward appearance is not more singular than its habits and disposition : unable to bear the brighter light of the sun, the Owl retires to some lonely retreat, where it passes the day in silence and obscurity ; but at the approach of evening, when all nature is desirous of repose, and the smaller animals, which are its principal food, are seeking their nestling places, the Owl comes forth from its lurking holes in quest of its prey. Its eyes are admirably adapted for this purpose, being so formed as to distinguish objects with greater facility in the dusk than in broad day-light. Its flight is low and silent during its nocturnal excursions, and when it rests it is then only known by its frightful and reiterated cries, with which it interrupts the silence of the night. During the day, the Owl is seldom seen ; but, forced from his retreat, his flight is broken and interrupted, and he is sometimes attended by numbers of small birds of various kinds, who seeing his embarrassment, pursue him with incessant cries, and torment him with their movements : the Jay, the Thrush, the Blackbird, the Redbreast, the Titmouse, all assemble to hurry and perplex him. During all this, the Owl remains perched upon the branch of a tree, and answers them only with awkward and insignificant gestures, turning his head, eyes, and body, with all the appearance of mockery and affectation. All the species of Owls, however, are not alike dazzled and confused with the light of the sun ; some of them being able to fly, and see distinctly in open day.

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## THE WHITE OWL.

LENGTH fourteen inches. Bill pale horn colour; eyes dark; the radiated circle round each eye is composed of feathers of the most delicate softness, and perfectly white; the head, back, and wings, are of a pale chesnut, beautifully powdered with very fine grey and brown spots, intermixed with white, the breast, belly, and thighs are white; on the former are a few dark spots: the legs are feathered down to the toes, which are covered with short hairs; the wings extend beyond the tail, which is short, and marked with alternate bars of dusky and white; the claws are white. Birds of this kind vary considerably: of several which were in the hands of the editor, the differences were very conspicuous, the colours being more or less faint according to the age of the bird; the breast in some was white, without spots—in others pale yellow.

The White Owl is well known, and is often seen in the most populous towns, frequenting churches, old houses, maltings, and other uninhabited buildings, where it continues during the day, and leaves its haunts in the twilight in quest of its prey. It has obtained the name of Screech Owl from its cries, repeated at intervals, and rendered loud and frightful from the stillness of the night.

M. Cronstedt, a gentleman, who resided on a farm in Sudermania, has recorded a very singular instance of the attachment of two Owls to their young:—

“A young Owl, having quitted its nest in the month of July, was seized by some of Mr. C.’s servants. The bird was accordingly shut up in a large hen-coop, and the next morning M. Cronstedt found a young partridge lying dead before the door of the coop. He immediately concluded that this provision had been brought thither by the old Owls, which he supposed had been making search in the night-time for their lost young one, and had been led to the place of its confinement by its cry. This proved to have been exactly the case, by the same mark of attention being repeated for fourteen nights successively.

“This gentleman tried to watch several nights, in order to observe through a window when the supply was deposited; but his plan did not succeed; and it would appear that these Owls, which are very short-sighted, had discovered the moment when the window was not watched, as food was found to have been deposited for the young

before the coop that very night. In the month of August this care ceased; but that period is exactly the time when all birds of prey abandon their young to their own exertions."

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### THE SHRIKE.

The Grey Shrike is the most common of the European species. It is about ten inches in length, and fourteen in breadth; its bill is black, about an inch long, with hooked end. The general colour is ash, but it is varied with black and white. This bird preys chiefly on the smaller birds, which it strangles like the Hawk, and then fastens to some sharp thorn to devour them at its ease. The larger insects are also preyed upon by the Shrike, and spitted on thorns. It is a very bold bird, and drives away even Crows and Hawks, not permitting it to come within reach of its nest. The nest is built with great art, of moss, wool, and small twigs and fibres, and lined with feathers. The Shrike makes a peculiar grating noise in the summer evenings.

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### THE COLLARED SHRIKE

Is of the same size as the grey, black above and white beneath. It is a native of Africa. It is a very fierce and destructive creature, killing locusts, mantedes, and small birds, in numbers far exceeding its consumption, and spitting them, on thorns or between the branches. It drives away the birds of prey, who sometimes avail themselves of its collections.

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### THE JOCOSE SHRIKE

Is about the size of a lark, brown above, dull white beneath, with bright rose colour under the tail: the crown of the head black and crested, with crimson spots under the eyes. It is a native of the East, and is of a very docile disposition, so that it may be taught to perform many pleasing tricks.

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## THE TYRANT SHRIKE

Is only eight inches in length: it is of a dark brown colour above and white below: the head and tail are black, the former has a stripe of orange on each side. These are its colours in Carolina and Georgia, but it varies much in other parts of America. It is a bird of singular courage, pursuing and putting to flight any bird that ventures too near its nest. It has been seen to fix itself on the back of an Eagle, and completely master him by its persecutions. It has a chattering note, and is harmless with respect to man. It builds its nest in an open manner on the ground. The eggs are flesh coloured, with spots of pink and black at the larger end.

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## THE KITE.

THE Kite may be distinguished from all the rest of its tribe by its forked tail, as well as by its slow, equable, and almost incessant motion on the wing. Its length is twenty-seven inches, and the expansion of the wings about five feet. It subsists principally on accidental carnage; and is an insidious thief, rather than a bold robber. It prowls about in quest of prey; and, when it meets with a stray chick, or an unsuspecting bird, it pounces upon it at once.

The Kite usually builds its nest in woods, particularly in mountainous countries. Lord Bacon observes, that when this bird flies high, fine dry weather may be expected. Formerly it was considered as valuable in medicine, but on no just foundation.

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## THE CRANE.

THIS is a long, tall, slender bird, of little elegance, or beauty in its external appearance. The head is covered with black bristles, and the back part of it, which is bald and red, is a sufficient distinction between it and the stork,





*Crane.*



*Hen and Chickens.*





to which, in other respects, it is nearly allied. The plumage is ash-coloured, and two large tufts of feathers spring from the pinion of each wing, bearing some resemblance to hair, which the bird can erect or depress at pleasure. In former times, their feathers were often set in gold, and worn in the caps of persons of distinction by way of ornament.

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## THE HEN.

The fecundity of the hen is great; she lays generally two eggs in three days, and continues to lay through the greatest part of the year, except during the time of moulting, or shedding their feathers, which lasts about two months. After having laid about twenty-five or thirty eggs, she prepares for the painful task of incubation. If she should be deprived of her own eggs, she will cover those of any other kind, or even fictitious ones of stone or chalk.

A sitting hen is a lively emblem of the most affectionate solicitude and attention: she covers her eggs with her wings, fosters them with a genial warmth, changing them gently, that all parts may be properly healed. She seems to perceive the importance of her employment, and is so intent on her occupation, that she neglects, in some measure, the necessary supplies of food and drink; she omits no care, overlooks no precaution, to complete the existence of the little incipient beings, and to guard against the dangers that threaten them. Though naturally timorous, she is now a heroine at the head of her troop of chickens; she is no longer acquainted with fear; she springs to the eyes of the stoutest dog, and is inspired with so much courage by her new dignity, that she would venture to encounter the fiercest animal in their defence.

Buffon, with his usual elegance, observes, "that the condition of a sitting hen, however insipid it may appear to us, is perhaps not a tedious situation, but a state of continual joy."

Chickens have been long hatched in Egypt by means of the artificial heat of an oven. In order to make a calculation of the number thus hatched, it has been supposed that, upon an average, each brood consists of about 30,000; from which it also appears, that the ovens of Egypt annually give life to at least 92,640,000 of these animals!

## THE HERON

Frequents the banks of inland waters, and other marshy places, and feeds, not only on the lesser marine and amphibious animals, but also on field-mice, insects, snails, worms, &c. They build in large societies in the same place; in flying they carry their neck contracted and folded over the back, and their legs straightened; they migrate periodically.

The Common Heron, when full grown, measures more than three feet in length; the plumage of the back is of a blue-grey, of the under parts white, and the sides black; on the head is a black depending crest.

The Common Heron is found in most parts of the world; it retires in winter from the frigid zone; in England, however, where it abounds, it remains stationary. It resides in watery situations, and feeds on small animals of all kinds. Its great voracity renders it a dangerous neighbour to the fish-pond. In the breeding season, the Herons unite in flocks, and build together in the highest trees: the nests are placed very near together, and the number in one tree has been known to amount to eighty. The nest is large and flat, made of sticks, and lined with a few rushes and feathers, or wool. The eggs are three or four in number, of a fine sea-green colour. Heron-hawking was formerly an esteemed diversion: the flesh was in repute for the table.

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THE DOTTEREL.

THE length of this bird is about nine inches. Its bill is black; the cheeks and throat are white; the back and wings are of a light brown, inclining to olive; the breast is of a pale dull orange; the belly, thighs, and vent, are of a reddish white: the tail is of an olive colour.

The Dotterel is common in various parts of Great Britain, though in some parts it is scarcely known. They breed in the mountains of Cumberland and Westmoreland and on several of the Highland hills, where they are seen only during the breeding season; but they are very common in Cambridgeshire, Lincolnshire, and Derbyshire, appearing in small flocks on the heaths and moors of those countries,

during the months of May and June, and are then very fat, and much esteemed for the table. The female makes her nest among the high weeds which shade the banks of rivers and pools, and lays two or three eggs.

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## THE COMMON BITTERN

Is about two feet and a half in length : the general colour of the plumage is a pale yellow, finely varied with spots and bars of black ; the wings are ferruginous, regularly barred with black ; the tail is short ; the legs of a pale green. The female is something smaller, and her plumage is less bright.

Bitterns are found in England, and the temperate countries of the Continent ; they migrate in winter from the severer climates. The Bittern is a shy and solitary bird, concealing itself among the rushes, with its head so placed as to see above them. It is courageous and fierce ; and makes a violent resistance when wounded, often turning on its back, and fighting with its beak and claws. The beak, from its strength and sharpness, often inflicts a very dangerous wound : on this account, old buzzards never attack the Bittern, and the common falcons rush upon it from behind, and when on the wing. The nest is built of broken reeds &c., and placed as near as possible to the water ; the eggs are of a dull green, and four or five in number. The young are very helpless when first hatched, and appear nearly all legs and neck. It is at this time that the male utters the strange noise called booming, which is compared to the deep bellowing of the bull. It makes another strange noise when soaring high in the autumn evenings after sunset : its flight is heavy. The Bittern, in spite of its carnivorous appetite, is esteemed for the table.

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## THE COMMON BAT.

THE bat tribe, of which we have four species, seem to occupy a middle station between quadrupeds and birds; but though at a first glance they may seem more nearly allied to the former than the latter, it is only in their power of raising themselves into the air, by means of membranes that extend their body, that they have any resemblance to birds. Like quadrupeds, they bring forth their young alive and suckle them; their lungs and their intestines are formed in a similar manner; and humiliating as it may appear, in some respects they so nearly approximate the human conformation, that Linnaeus has placed them in the very first rank of animated nature.

The common bat is about the size of a mouse, or nearly two inches and a half long. The body is covered with a short fur of a mouse colour, tinged with red; the eyes are small, and the ears exactly resemble those of a mouse. The members, usually called wings, are merely the four interior toes of the fore feet, extended to an enormous length, and connected by a thin membrane, capable of being contracted at pleasure, reaching also to the hind legs, and from them to the tail. The first toe is entirely loose and flexible, serving as a heel when the bat walks, or as a hook when it is desirous of adhering to any thing. The hind feet are disengaged from the surrounding skin, and divided into five toes, furnished with sharp claws.

This little animal makes its appearance in the summer evenings, and flies about in quest of its prey, with a laborious undulating motion. It principally frequents the sides of woods, glades, and shady walks; but it also skims along the surface of rivers and lakes, or wherever it can find gnats, moths, and other nocturnal insects. If it happens in its flight to strike against any object, and falls to the ground, it is caught with facility. It pursues its prey with open mouth, and when satisfied, retires to its habitation, which is commonly the chink of a ruined building, or the trunk of a tree. There it sleeps away the greatest part of the day, even in summer, never venturing abroad by day-light, or in rainy weather; but as soon as winter sets in it becomes wholly torpid, and remains in that state till the return of spring.

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*Pelican.*



*Cassowary.*



## THE PELICAN.

The common Pelican, for there are several species, is considerably larger than the swan, and nearly of the same shape and colour. Its neck is long, and the toes are all connected by webs. The chief peculiarity, however, of the Pelican lies in the enormous bill, and the extraordinary pouch underneath. The former is fifteen inches long, from the point to the opening of the mouth, which is placed at some distance behind the eyes. From the lower edges of the under chap is suspended a large bag, reaching its whole length, and said to be capable of containing fifteen quarts of water. This appendage the bird is capable of contracting or distending at pleasure. When empty, it is scarcely perceptible; but, when the Pelican has been successful in fishing, it becomes dilated to an incredible extent; for the first thing which the bird wishes to effect in fishing, is to replenish its bag, and then to retire and feed at leisure. Tertre affirms, that it is capable of concealing as many fish as would satisfy six hungry men.

Wonderful as the conformation of the Pelican is, no doubt it falls very short of the fables that have been invented concerning it. We have been gravely amused with stories of its feeding its young with its own blood, and of filling its pouch with water, to supply them in the deserts. Struck with its extraordinary figure, mankind seem to have been willing to supply it with no less extraordinary qualities and appetites: and, having found that it possessed a large reservoir, they were inclined to convert it to the most tender and parental uses. But the fact is, pelicans are very heavy, sluggish and voracious birds; and possess no instincts but what are necessary for the preservation of the kind, and the supplying themselves with a sufficient quantity of food. However, they feed their young with macerated fish for a time, and attend with affectionate assiduity, till they are able to provide for themselves.

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## THE CASSOWARY.

NEXT to the ostrich, this is one of the largest and heaviest of the feathered creation. It is about five feet and a half from the point of the bill to the extremity of the claws. The wings are, in a great measure, concealed under the feathers of the back, and are so small as to be almost imperceptible. Hence it may be concluded, that the Cassowary does not use them in flight; and its plumage is of one kind, and externally of the same colour. Each feather is generally double, having two long shafts proceeding from a short socket, fixed in the skin. These double feathers are always of unequal length, some being fourteen inches long, and others only three.

The most remarkable part, however, of the Cassowary is the head, which is armed with a kind of helmet of a horny substance, extremely hard, and capable of resisting a violent blow. The eyes are of a bright yellow: and, in short, the whole conformation is strikingly majestic. It has the head of a warrior, the eye of a lion, the defence of a porcupine, and the swiftness of a courser. Yet, though endowed with powers, apparently formidable, for its own defence, it never attacks other birds: and, when pursued, it either kicks like a horse, or overturns its assailant by running against him, and treading him under foot. It moves with astonishing celerity, but in the most awkward form imaginable, swallows up every thing without distinction that comes within its reach, and what it cannot digest, it voids unaltered without injury to itself.

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## THE PEACOCK.

No expressions could do justice to the beauty of this bird, where it necessary to enter into a detail of its superb tints; but fortunately it is too well known to require a long description. When it appears with its tail expanded, none of the feathered creation can vie with it in elegance and magnificence; but the harsh scream of its voice diminishes the pleasure received from its brilliance; while

its insatiable gluttony, and its spirit of depredation, still more to alienate our attachment from the only merit which it can claim, its incomparable beauty.

The pea-hen is far less beautiful than the cock ; she lays five or six eggs, and studies to hide her nest from her mate, lest he should interrupt the office of incubation, or break her eggs.

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## THE DOMESTIC TURKEY.

The wild turkey was first carried to Europe and other parts of the eastern continent and domesticated many years after the discovery of America. It is said to have obtained the name of Turkey from its being introduced when it was the custom to derive many of the luxuries of life from that country. It is now extensively diffused over the world, and its flesh is ranked among the most delicious poultry.

The cock is a cowardly fellow, strutting about, and displaying his plumage with great ostentation; he is also very noisy and quarrelsome. The hen seems to possess a more modest and retiring disposition, wandering about the fields with a melancholy and dejected air, occasionally uttering a short plaintive note. She is exceedingly attached to her young, but leads them away from danger without ever attempting to defend them by repelling an attack.

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## THE QUAIL.

THIS is the smallest bird of the gallinaceous kind, being little more than half the size of the partridge. It is a bird of passage, however ill adapted it may appear for extensive migration. The fact, however, is certain, that they seek a warmer climate when winter sets in, or at least shift their quarters from one province to another ; probably as much allured by the promise of food in greater quantity, as of a more temperate sky.

The quail builds its nest on the ground, and is much less prolific than the partridge, seldom producing more

than six or seven young. It is easily caught by a call which is formed to imitate the voice of the female.

Quail fighting was a favourite diversion among the Athenians; but they abstained from eating the flesh. Modern manners have reversed the sentiments of mankind in regard to this bird: its flesh is now deemed a peculiar delicacy, while its courage is disregarded. Of this bird there are different species or varieties.

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## THE FLAMINGO.

THIS is a tall, bulky, and most beautiful bird. The body which is of a vivid scarlet, is about the size of a swan; but the legs and neck are of such extraordinary length, that when it stands erect, it is upwards of six feet high.

This extraordinary bird, it seems, was one known on all the coasts of Europe, but is chiefly now found in America, and some parts of Africa. Its magnitude, its beauty, and the peculiar delicacy of its flesh, when young, have afforded so many incitements for its destruction, that it has long abandoned the shores frequented by man, and taken refuge where he seldom intrudes. In some of the wild and solitary tracts of America it lives in a state of society, and under a polity which excites at once our veneration and wonder.

The Flamingo chiefly delights in the vicinity of salt-water lakes, and swampy islands. In the day-time, they come down to the mouths of rivers; but towards night retire more inland to secure themselves from annoyance. When they suffer themselves to be seen by mariners, they always appear drawn up in a close line of two or three hundred together; and, according to Dampier, exhibit at the distance of half a mile, the exact representation of a long brick wall. When they seek for food, their ranks are broken; yet not before they have stationed one of the number as a watch, whose sole employment it is to give the signal of approaching danger. As soon as the faithful centinel perceives the remotest signs of annoyance, he screams with a voice as loud as a trumpet, and instantly the whole flock are on the wing.

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*Flamingo.*



*Long eared Owl.*



## THE LONG-EARED OWL.

Its length is fourteen inches; breadth somewhat more than three feet. Its bill is black irides of a bright yellow; the radiated circle round each is of a light cream colour, in some parts tinged with red; between the bill and the eye there is a circular streak of a dark brown colour; another circle of a dark rusty brown entirely surrounds the face: its horns or ears consist of six feathers, closely laid together, of a dark brown colour; tipped and edged with yellow; the upper part of the body is beautifully pencilled with fine streaks of white, rusty, and brown; the breast and neck are yellow, finely marked with dusky streaks, pointing downwards; the belly, thighs, and vent feathers are of a light cream colour; upon each wing there are four or five large white spots; the quill and tail feathers are marked with dusky and reddish bars; the legs are feathered down to the claws, which are very sharp; the outer claw is moveable; and may be turned backwards.

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## THE SHORT-EARED OWL.

Length fourteen inches; breadth three feet. The head is small, and Hawk-like; bill dusky; the irides are of a bright yellow and when the pupil is contracted, shine like gold; the circle round each eye is of a dirty white, with dark streaks pointing outwards; immediately round the eye there is a circle of black; the two horns or ears consist of not more than three feathers, of a pale brown or tawny colour, with a dark streak in the middle of each; the whole upper part of the body is variously marked with brown and tawny, the feathers are mostly edged with the latter: the breast and belly are of a pale yellow, marked with dark longitudinal streaks, which are most numerous on the breast: the legs and feet are covered with feathers of a pale yellow colour; the claws are much hooked and black; the wings are long, and extend beyond the tail; the quills are marked with alternate bars of dusky and pale brown; the tail is likewise marked with bars of the same colours, and the middle feathers are distinguished by a dark spot in the centre of the yellow space; the tip is white.

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## THE WOODCOCK.

The woodcock is a most delicate bird, the favourite food of dainty palates, and affording particular amusement to the fowler, to bring down. Its colours are a variation of black, grey, and reddish brown; the beak is three inches long, and formed for probing soft moist ground.

During summer, woodcocks inhabit the Alps and the northern countries of Europe, where they breed. They subsist wholly on worms and insects, which the extensive forests and lakes of the North produce in abundance; but no sooner does the frost set in, than they wing their flight to more temperate climates, and continue there till the beginning of March, when they regularly disappear, except a small number which occasionally breed with us. Before their departure, they flock towards the sea coast, and, if the wind be favourable, immediately take wing; but, if it be adverse, prudently wait for a more propitious gale.

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## THE PLOVER.

During the winter season, this elegant bird frequents our moors and heaths in small flocks. Its length is eleven inches, and the expansion of its wings twenty-four. The head, back, and coverts of the wings are black, beautifully spotted with light yellowish green; the breast is brown, marked with greenish oblong strokes, and the belly is white. This bird makes a shrill whistling noise, and may be enticed within shot by a skilful imitation of its note. It breeds on unfrequented mountains, and is very common in the western islands of Scotland.

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## THE PIGEON.

This bird and all its beautiful varieties derive their origin from the stock-dove; but the discriminations are become so numerous, from cultivation, that it is impossible to enumerate or describe them. The domestic pigeon, which is itself the creature of art, has given rise to many elegant

varieties, all distinguishable by names expressive of their several properties: such as tumblers, carriers, jacobins, croppers, pouters, vents, turbits, owls, nuns, &c.

The domestic pigeon is wonderfully prolific: it lays two eggs, and generally breeds every month, and, except during severe weather, is generally capable of supplying itself with food. The period of incubation is fifteen days, during which the male and the female relieve each other. Their turns are generally regulated with great exactitude: the female usually sits from about four in the evening till nine next morning; at which time she is superseded by the male, who diligently supplies her place till nearly the return of the same hour, while she is busy, searching for food. If the female should prove negligent of her duty, the male will pursue and drive her to the nest; while, on the other hand, should the male not return at the expected time, his mate will retaliate with equal severity.

When the young are hatched, they require no food for the first three days, but only to be kept warm. After this, the parents feed them for eight days, by discharging into the mouths of the expectant offspring whatever they have been able to treasure up in their crops. This mode of feeding the young from the crop is peculiar to the family of pigeons; and nature has furnished them with a pretty large receptacle, for the purpose of taking in an ample store of provisions. The males commonly supply the young females, and the females perform the same office for the young males. At first the young are furnished with food considerably macerated; but as they grow older, the parents gradually diminish the trouble of the preparation; and at length send them forth to shift for themselves. However, when provisions are plentiful, they do not wait for the total dismissal of their young; for it is nothing uncommon to see a brood almost fit for flight, mixed with a set of young ones in one identical nest.

Among domestic pigeons connubial consistency is seldom long maintained; the males sometimes contend for the same mistress, and sometimes a kind of amicable exchange takes place between them.

The fecundity of this bird is so prodigious, that from a single pair nearly 15000 may be produced in the space of four years. Hence, they will repay the charge of providing them with appropriate dwellings and occasional distributions of food.

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## CROW.

Most of this tribe build in trees, and lay five or six eggs. They are often gregarious, and of those found in Europe, the greater number eat both animal and vegetable substances; their voice is hoarse and clamorous, but some may be taught to articulate.

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## THE RAVEN

Is the largest of the European species, measuring about two feet two inches in length; the whole bird is black, finely glossed with blue. It frequents woody places, often near towns for the sake of carrion and offals; it also attacks the smaller birds, and sometimes young lambs and leverets. It builds on trees or among rocks, and forms its nest of roots, and twigs mingled with the bones of its prey; the whole is lined with moss, hair, &c. The eggs are five or six, blueish green, spotted with brown. It is a native of almost every part of the world.

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## THE CARRION CROW

Very much resembles the Raven, but it is rather smaller. It lives chiefly in the woods, in pairs. They are very general in both continents.

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## THE ROOK

Is rather larger than the Crow, though so like as frequently to be confounded with it. It is of a gregarious nature: great numbers build in neighbouring trees, where they make a clamorous noise. They go in pairs and both birds sit. Their food is chiefly of grain, and the larvæ of the cockchaffer

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## THE JAY

Is the most beautiful British species of this genus. It measures about thirteen inches in length, and is of a moderately stout form. Its general colour is a purplish buff, paler on the under parts. The wings are black, with a large white spot in the middle of each wing: the wing covers are glossy pale blue with small bars of black edged with white: the bill and tail are black. The Jay is common in England and many parts of Europe, living in woods, and feeding on wild fruits and nuts as well as insects and small birds. It builds in trees: the eggs are five or six in number; the young follow their parents for a twelvemonth. The natural note of the Jay is harsh and loud; in calling its young it mews like a cat. This bird, like the raven, crow, jackdaw, and magpie, may be taught to articulate.

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## THE JACKDAW

Is a well known inhabitant of the temperate parts of Europe. It is about the size of a small pigeon, being thirteen inches in length. Its colour is black varying to greyish. It is a docile and loquacious bird; breeds in steeples, old castles, and high rocks. In some places they will build in rabbit holes.

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## THE RING-DOVE.

This bird receives its appellation from a very regular and beautiful white circle round its neck; the parts above and below which are delightfully variegated with changeable colours, according to the position in which they are viewed by the spectator.

The Ring-Dove is the largest bird of the kind, which is a native of Britain. It seldom flies singly, but in large flocks; and subsists on ivy-berries, and other vegetable substances. It builds its nest in the branches of trees; and

all attempts to reclaim it have hitherto proved ineffectual. At the commencement of winter, this species desists from cooing; but they pair again about the beginning of March.

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### THE TURTLE-DOVE.

This beautiful little bird is found in several parts of England, but particularly in the western counties. It feeds on a variety of vegetable substances; and, being remarkably shy, breeds only in the most retired situations. Its faithful attachment to its mate has been proverbial in every age; and, if we may credit vulgar tradition, when either of them pays the debt of nature, the survivor remains in a state of disconsolate solitude to the end of its life.

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### THE LARK.

With this sweet songster, universally considered as har-binger of the spring, and herald of the morn, so many delectable ideas are connected, that few birds are more universal favourites of mankind. There are various species, such as the common or sky-lark, the wood-lark, the tit-lark, and the field-lark; but all the family is musical. The sky-lark is too well known to require a particular description of its form. This species, and the wood-lark, are the only birds that sing as they poise themselves in the regions of ether. The former begins its song before the earliest dawn; nor can any thing be more agreeable to the lover of nature, than to behold it warbling on the wing, and to hear it raise its notes as it soars, till it seems lost in immense heights above him. And, to see it afterwards descending with a swell, and sinking gradually as it approaches its nest, the spot where all its delights are centered, fills the heart of sensibility and intellectual refinement with inexpressible satisfaction and delight.

The lark builds her nest on the ground, lays four or five eggs, and commonly produces her young about the beginning of May. While she is performing the office of incubation, the male usually entertains her with his song, and, though he rises to an imperceptible height, never once loses sight of his beloved partner. This harmony continues for several months. In winter, however, larks, in

common with most other birds, become mute; and they then assemble in large flocks, and are caught in great numbers for the sake of their flesh, which is fat and delicate.

Though the music of any bird in captivity must necessarily generate somewhat of a disagreeable sensation in the breast of humanity, both the sky and the wood-lark are frequently caged for the sake of their songs. The notes of the latter are by some preferred to those of the nightingale, and they are sometimes mistaken for that supreme mistress of vocal harmony. It is only, however, in a state of nature, that they possess all their charming modulations. Imprisonment and slavery, as they lessen the joys, so they detract from the powers of pleasing, in every thing that has life.

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### THE BLACK-BIRD.

The plumage of the male black-bird is of a coal-black colour, that of the female is of a brown or dark russet. Though of a retired and solitary disposition, it is a very well-known bird, and the deepest toned warbler of the woods.

The note indeed of the black-bird, when heard at a proper distance, is perhaps, the most cheering of any among the musicians of the grove; but when confined in a cage, it is loud and deafening. It may be taught, however, to imitate the human voice.

In some very cold countries, and particularly on the Alps, a variety of this bird is sometimes found with a pure white colour.

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### THE CANARY-BIRD.

This beautiful little creature was originally a native of the islands from which it receives its name: but has been domesticated in Europe for at least two centuries, and is a frequent ornament of the parlour or the hall; but, though it will breed in captivity, and even intermix with other birds of the same genus, it is too delicate to endure our climate in a state of nature. It will live in a cage from ten to fifteen years.

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## THE YELLOW BIRD, OR GOLDFINCH.

This beautiful little songster makes its appearance in America about the first of April, and soon sets about building its nest upon an apple tree or shrub. This is very neatly and delicately formed, and in it five young ones are hatched.

The song of the Yellow Bird is pleasant, but so feeble that it seems to be at a distance, when perhaps he is perched over your head. He flies in a peculiar manner, rising at each impulse of the wing, and then sinking in a graceful bend towards the ground. As he flies easily along, he utters his cheerful and pleasing note, and appears as happy as the most favoured of the careless and innocent creatures, who live upon the bounty of Providence.

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## THE RED-BREAST.

Of all birds this is the most familiar. The beauty of its form, the vivacity of its motions, and the confidence it seems to repose in man, all unite to secure it from annoyance. Add to this, several popular prejudices which operate in its favour, and which seem to prevail in every country where it is known. It feeds on insects, eats crumbs of bread, when its usual food fails; and, while other birds are ready to perish with cold and hunger, it seeks the shelter of a house or cottage, in which it is generally a welcome guest.

The song of the Redbreast is remarkably soft and sweet, and the more to be valued, as we enjoy it during the greatest part of the winter, when the other feathered choristers are silent. In summer, indeed, it is equally musical; but then its modest notes are undistinguished in the general warble of the choir.

Thomson marks by a just and elegant description, the domestic habits of this bird during winter; but it is, perhaps, as much indebted to the ballad of "the babes in the wood," for its universal favour and esteem with us, as to any combination of other causes whatsoever. Indeed, not only our poets, but our painters, have exerted their respective talents in recommending this innocent songster to our attention; and surely, where genius labours to improve our sensibilities and to awaken our most generous passions, it demands our love and respect.



## THE DODO.

There are perhaps three species of Dodo; one, called the Solitary, makes its nest in bye-places, of leaves of the palm, a foot and a half in thickness, and lays one egg. The male sits in turn, and does not suffer any bird to approach within two hundred yards of the spot while the hen is sitting, which is seven weeks.

The young is some months before it can shift for itself, the old ones are affectionate to it, and faithful to each other. The young ones are esteemed for the table. It is said that a stone is found in the gizzard: perhaps no more than in all granivorous birds.

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## THE SPOONBILL.

THE most remarkable peculiarity of this bird is its bill, from the shape of which it derives its appellation. The member is of a black shining bright colour, and has its upper surface waved with dotted protuberances; the whole substance being thin, light, and elastic, like whalebone. The plumage of the whole body, wings, and tail, is white, and the head is adorned with a beautiful crest of white feathers bending backwards. The legs are black, as are the thighs, which are naked half their length.

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## THE NIGHTINGALE.

THE nightingale has been so long celebrated for its melody, with which it charms the ear, and which is, perhaps, unrivalled among birds, that its very name seems to embellish poetical description, and to convey a sort of pleasure to the mind, which words cannot easily depict. Almost every modern versifier mentions it with congenial rapture; and the ancient bards, who so closely painted from nature, have exerted themselves to praise its reputation.

This bird, the most celebrated of the feather tribe, for

the variety, length, and sweetness of its notes, visits England about the beginning of April, and leaves it in August. It is found only in some of the southern and midland counties, and is said to be unknown in Scotland, Ireland, and North Wales. It commences its song in the evening, when other birds are generally at roost, as if it disdained to waste its music in the throng, and continues it by intervals during the whole night; and, if undisturbed, will sit for weeks together almost on the same tree. It builds its nest near the bottom of some hedge, so artfully secreted, that it generally eludes the inquisitive eye of the school-boy; and surely, robbing it or other birds of their eggs and young, without any intention to rear them, is a pitifaction, compared with the pain that is inflicted. Thompson thus paints the feelings, and pleads the cause of the songster under consideration.

But let not chief the nightingale lament  
Her ruin'd care, too delicately form'd  
To brook the harsh confinement of the cage.  
Oft when, returning with her loaded bill,  
The astonish'd mother finds a vacant nest,  
By the hard hand of unrelenting clowns  
Robb'd; to the ground the vain provisions fall,  
Her pinions muffle, and, lo, drooping, scarce  
Can bear the mourner to the poplar shade;  
Where, all abandon'd to despair she sings  
Her sorrow through the night, and on the bough  
Sole sitting, still at every dying fall,  
Takes up her lamentable strain  
Of winding woe, till, wide around, the woods  
Sigh to her song, and with her wails resound.

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### THE SPARROW.

This bird, from its frequenting only the abodes of men and places adjacent, may be said to be chiefly fed from human industry; for, in spite of every precaution, it will partake of the food of the domestic pigeons and poultry, and consumes a considerable quantity of grain: on this account it has been long proscribed, and a reward set on its head; but still the species continues undiminished.

In autumn, sparrows assemble in flocks, and roost on trees near habitations; at this time they may be shot by dozens. The flesh is not very well flavoured; and the note is still less alluring. Nevertheless, the sparrow, by its vivacity and frequent appearance, affords some amusement to the lover of nature. It is a familiar, but a crafty bird; and, though it seems to betray but little fear, it exercises a necessary caution for its security.

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## THE SWALLOW.

The swallow is remarkable for the wideness of its tail, which is always open when flying, the shortness and slenderness of its feet, and the immoderate length of its wings. These qualities are indeed essential to the kind of life which they lead, and enable them to provide the means of ready subsistence. Insects are their principal food, and no sooner does spring awaken that class of animated nature from their state of torpidity, than the swallow makes its appearance. At first it flies heavily and feebly, as if wearied with its journey; but, as the weather grows warmer, and the number of those insects increases, it acquires additional strength and activity.

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## THE BARN SWALLOW,

An American species, very much resembles the Common Swallow. Its nest is built in out-houses or sheds, and occupies a week in its construction; its form is that of an inverted cone, flattened on the side, which adheres to the rafter or beam which supports it: it is composed of mud, intermixed with hay, and lined with thatch and goose-feathers. These birds are very sociable, often building thirty pair in one barn. They are easily caught and tamed; they have a pleasant warble.

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## THE STORK.

Storks are esteemed as destroyers of vermin of various kinds ; their food and habits resemble those already described as belonging to the order. They migrate in flocks, and are very easily tamed.

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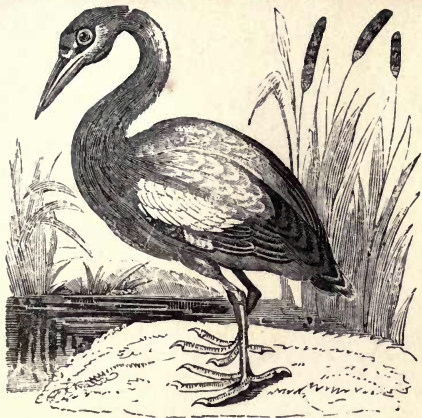
## THE COMMON, OR WHITE STORK,

Has its plumage of a pure white, excepting the scapulars and wings, which are black : its length is about three feet and a half. It inhabits the temperate climates of the Old Continent, and but rarely visits England. It abounds in many parts of Holland and France, walking familiarly in the streets, and breeding on the house-tops, where it is provided by the inhabitants with boxes : it is very useful in clearing the places it frequents of mice, frogs, &c. The nest is large, and composed of sticks ; the female lays from two to four eggs, about the size of a goose's, and of a yellowish white ; both parents attend to the training of the young. The storks are birds of passage, leaving Europe at a regular period for a warmer country. Previously to their departure, they assemble in large flocks, with great bustle amongst themselves, and after several excursions, as if to prove their strength, set out at once and in silence. The stork sleeps upon one leg, and before the time of his migrations, makes a strange snapping noise with its beak. The flesh is unfit for food. Many idle stories have been told of the filial attachment, &c. of the stork : but they appear fabrications.

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## THE RHINOCEROS HORNBILL,

A native of Java, is about the size of the hen turkey, but of a more slender shape. The colour is black, excepting on the lower part of the abdomen and the tip of the tail



*Stork.*



*Cock.*





which are white. The bill measures ten inches in length, is slightly curved at the tip, and has, near the base of the upper part, a large process turned upwards like a horn; it is red above and yellow below, divided by a black line, and black towards the base: the bill is nearly similar. The bird observed, appeared heavy and timid, and of a dull disposition, it hopped in the manner of a crow, and manifested great affection towards the person who took care of it, running towards him with extended wings, and a scream of joy.

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## THE COCK.

Of all the birds the cock seems to have been first reclaimed, and earliest taken under the protection of man. Having been long subject to human cultivation, he exhibits a prodigious number of varieties, and has lost almost every trace of his original instincts and independence.

At what period this valuable bird was first domesticated is wholly unknown; but it is generally supposed that he was introduced into the western part of the world from Persia; whence Aristophanes calls him the Persian fowl, and informs us, metaphorically, we suppose, that this fowl enjoyed that empire before some of its earliest monarchs. Under the Druidical dispensation, we find the cock forbidden as food among the ancient Britons.

This domestic bird seems almost to have banished the idea of the wild one; and, were it not occasionally seen in the woods of India, and in some of the oriental islands, doubts might be entertained as to the form wherein it first appeared in a state of nature. However, it is sufficiently known to naturalists, that in his original haunts, the cock has black and yellow plumage, and a purple and yellow comb and wattles.

When opposed to his own species, the cock is among the most courageous of animals, and wherever the refinements of humanity, and the polish of good manners have not superseded ferocity and barbarism, cock-fighting seems to have constituted a principal diversion. In India, China, the Philippine Islands, and all over the East, this brutal pastime is, and ever has been, the amusement of kings and princes. Fortunately for our national reputation, this savage sport is verging to decay in England, and will, we



hope, ere long be regarded with abhorrence, even by the lowest classes. The breed of this country is commonly thought to be more bold and hardy than that of any other ; but, in reality, the cocks of China are equal, if not superior, to those of Britain ; and, as there are some who venture large sums on the prowess of a single fowl, it seems extraordinary that no pains have been taken to ameliorate the breed by a foreign mixture. But, as cock-fighting is a dastardly, wanton, and ignoble amusement, it is not our wish to promote barbarity by new incentives ; since he, who advises or recommends the art of cruelty, can scarcely be considered in any other light than as an accessory to the fact.

By the ancients the cock was consecrated to Minerva, as the symbol of vigilance ; to intimate, that genuine wisdom is ever on its guard.

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## THE SWAN.

The tame swan is too well known to require a minute description. It is the largest of British birds, and of all others the most majestic and picturesque, when exercising its native propensities in the water. It lays seven or eight eggs, and is nearly two months in hatching. It subsists chiefly on aquatic plants and roots, but sometimes devours insects.

The swan was considered as a very delicate viand among the ancients ; by whom the goose, however, was reprobated as wholly indigestible. The revolutions of manners have, it should seem, inverted tastes as well as opinions : the goose is become a high favourite with modern epicures, while the swan is seldom served up, except for the purpose of magnificence or ostentation.

The swan is supposed to live about a hundred years, and is considered as one among the first ornaments of rivers or artificial pieces of water.

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## THE WHISTLING OR WILD SWAN.

Is less than the tame species, and about five feet long. The plumage is of a pure white : the bill is of a yellowish white colour towards the base, and black at the tip ; the

legs are black or reddish. This bird is found throughout the temperate climates of the earth; in summer frequenting the higher latitudes, and in winter resorting to milder regions. Some of the Indians form garments of their skins, leaving the down still attached to them. Of the larger feathers they make diadems for their chiefs, and weave the smaller on threads to ornament the garments of their ladies of quality. In August the swans lose their feathers, and being disabled from flying, are then easily caught: in Iceland and Kamschatka, they are hunted with dogs. The eggs are esteemed for food; and the flesh is a favourite with the natives; so highly do they prize that of the young birds, that an entertainment is considered incomplete without it. This species has a sharp loud cry, which is heard at a great distance, even when the bird flies so high as to be out of sight. This peculiarity is referred to the structure of the windpipe, which assumes a serpentine direction in its way to the lungs.

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## THE GOOSE.

The bill is the principal characteristic which distinguishes the goose kind from all the feathered tribe. In other birds it is round and wedge-like, or crooked at the extremity; in the goose family it is flat and broad, formed for the purpose of skimming from ponds and lakes the mantling weeds which grow upon their surfaces.

The flesh of the tame goose is reckoned very delicate eating, and it is no less valued in some places, particularly in the Lincolnshire fens, for its feathers. In that county, an individual proprietor will sometimes possess a thousand old geese; which, in one season will increase seven fold, and are generally plucked five times in a year. This is certainly a very cruel operation; but, as quills form a valuable article of commerce, in this as in many other cases, the inhumanity of the action is overlooked, in the necessity that produces and the profit that attends it.

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## THE CANADA GOOSE

Measures about three feet six inches in length. The head and neck are black; under the throat is a broad white band of a crescent shape; the breast, the upper part of the belly, the back, and wing-covers, are dusky brown; the lower parts of the belly, and the upper wing covers, white; the quills and tail black. It inhabits North America, and migrates from the colder regions in winter. These birds pass in large flocks, and may be killed in great numbers, if care is taken not to alarm them beforehand, as they are very timid, and wary of approaching places where they perceive any movement. Those killed in autumn are thrown into large holes dug in the ground; and are thus preserved for winter use. The Canada goose is now pretty commonly domesticated in Europe, and is esteemed as an ornamental inhabitant of the pleasure-ground. Their flesh and quills serve at the same time to render them profitable where they abound.

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## THE GREAT AUK

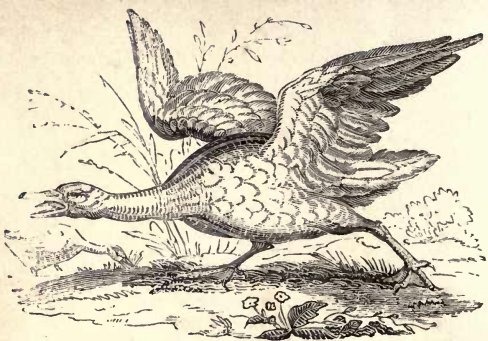
Is the size of a goose, of a black colour above, and white beneath: its wings are so small as to be useless for flight. This bird frequents the northern latitudes; it lays one large egg, close to the high-water mark; the egg is six inches long, white, marked with purplish lines, and spotted at the larger end with black or ferruginous. It feeds on fish and marine plants.

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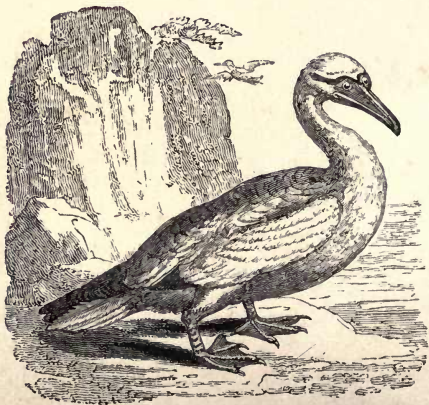
## THE TUFTED AUK

Inhabits Kamschatka: it is about nineteen inches in length; its plumage is black, inclining beneath to ash colour; on each side the head is a tuft of feathers, bending backwards, white at the base, and gradually darkening to a fine buff. It burrows in the ground, and lines its nest with feathers: it lays one large white egg. It feeds on crabs, shrimps, and other shell-fish, which it forces from the rocks with its strong bill.





*White fronted Wild Goose.*



*Gannet.*

## WHITE-FRONTED WILD GOOSE:

## OR LAUGHING GOOSE.

This species measures two feet four inches in length, and four feet six inches in the extended wings, and weighs about five pounds. The bill is thick at the base, of a yellowish red colour; the nail white: from the base of the bill and corners of the mouth, a white patch is extended over the forehead, the rest of the head, neck, and upper parts of the plumage are dark brown: the primary and secondary quills are of the same colour, but much darker; and the wing coverts are tinged with ash: the breast and belly are dirty white, spotted with dusky; the tail is of a hoary ash-coloured brown, and surrounded, like the Lag Goose's, with a white ring at the base: the legs yellow.

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## THE GANNET, OR SOLAND GOOSE.

This bird is of the size of the tame goose, but its wings are much longer. The bill is six inches long, inclines down at the point, and the sides are irregularly jagged, in order to effect a firmer possession of its prey. From the corner of the mouth proceeds a narrow slip of black bare skin, extending to the hind part of the head, and beneath this is a dilatable pouch, like that of the pelican, capable of containing five or six entire herrings, which, in the breeding season, it carries at once to its mate, or its young. The colour is chiefly white. These birds are extremely numerous in some of the Hebrides, the Skelig islands in Ireland, and the Ferro, between Scotland and Norway. But it is in the Bass island, in the Frith of Forth, that they are seen in the greatest numbers.

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## FLYCATCHERS.

The birds of this genus are among the most beautiful of their class; their name is derived from the expertness with which they catch the flying insects which form their food:

some few nourish themselves on fruit. They are natives of both continents. Many of the species are finesongsters, and others utter peculiar notes resembling articulate sounds.

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### THE PIED FLYCATCHER.

Is black, with its under parts, forehead and spot on the wing white. It is about the size of a linnet. It is a rare bird in these countries, and is confined to the counties of York, Lancaster, and Derby. Its nest is placed in the hole of a tree; and is formed of dry leaves, intermixed with broad pieces of bark, a little hay, and a few long hairs; the whole being lined with a few feathers. The female lays five eggs, of a pale blue colour. It is also found in Sweden and Northern Russia.

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### THE SPOTTED FLYCATCHER

Is found in many parts of England, and especially in Devonshire and Cornwall, and in most parts of Europe and of Siberia. It is about the size of a Tit-lark, scarcely six inches in length. Its colour is brownish, with the under parts whitish, and some dusky spots on the neck. These birds appear late in spring, and depart in September: they frequent orchards and fruit-gardens, and are particularly fond of cherries, of which they often prove great destroyers. Their nest is formed of bents, mosses, &c., intermingled with spiders, webs, and lined with feathers. The female lays four or five eggs, very much like those of the Redbreast.

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### THE FANTAILED FLYCATCHER,

A native of the South Seas, is a beautiful species, about six inches and a half in length. Its general colour is an olive-brown; the chin, throat and sides of the neck are white; the head is black, with a white streak above the



eyr; there is a black collar round the neck; the under parts are of a yellowish rust colour. The tail is wide, the two central feathers black, the others white. It is said to be so familiar that it will sit upon a person's shoulder and pick off the flies. It is always on the wing in pursuit of insects, and flies with its tail spread.

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### THE CHATTERING FLYCATCHER,

Is about six inches in length; the upper parts of the body are of a deep and rich olive-green, excepting that some of the feathers are tipped with dusky brown. The under parts are yellow: with the eyebrows, spots beneath the eyes and upper parts of the abdomen, white. This bird abounds in North America during the summer season. It haunts bushes of hazel, bramble, or other underwood; where it defends itself from encroachers by its strange tones, mimicking almost every noise it hears. Its nest is placed about four feet from the ground, and is composed of dry leaves, with layers of grape-vine bark, and a lining of fibrous roots and dried grass. The female lays four flesh-coloured eggs, with brown and dull-red spots. The male is peculiarly noisy whilst the female is sitting. They feed on whortle-berries and the larger coleopterous insects.

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### THE AZURE FLYCATCHER,

A native of India and the Phillippine islands, is of a shining blue above, and blueish white beneath: with a black spot on the back of the head and over the breast.

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### THE GREEN FLYCATCHER

Inhabits India; it is of a beautiful green-gold colour; dun-coloured on the throat and breast, and yellow on the belly and rump.

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## THE ROSE-BREASTED FLYCATCHER

Of New South Wales, is brown above and beneath; of a rich carmine colour on the breast, and whitish on the other parts.

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## THE WAXWINGS

Very much resemble the birds of the last species; but they are strongly distinguished from all other birds by a peculiar appendage to some of the wings resembling red sealing-wax. They feed on berries, and are about eight inches in length. One species occurs in many parts of the continent of Europe, and another throughout North America.

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## THE COMMON STARLING

Is black, with a gloss of rich green and purple and green only; beautifully spotted on the head and back with light brown, on the other parts with brown. The nest of this species is placed in some hole either in trees or walls, often in the deserted habitation of the woodpecker, or in pigeon-houses; the nest is artlessly built of dry grass or leaves; the eggs, four or five in number, are of a pale blue colour. These birds usually feed on insects; but they will eat grain and fruits, and when domesticated, any kind of meat. They are remarkably docile, learning to imitate the human voice, whistling, &c.; their natural note is shrill. Their flight is smooth and steady; but in winter, when they assemble in large flocks, they fly tumultuously, having a general rotatory movement as well as the progressive one. The young ones differ much from the old, being brown and mottled.

These birds abound throughout the eastern continent. The other species resemble the preceding in their manners, and are found in various parts of the world.

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## THE PARTRIDGE.

Though the partridge is incapable of domestication, it lives no less under the protection of man, at least in this country, than if it were private property. It may change its master, indeed, but it is always supposed to belong to persons of a certain rank. If a person not qualified, that is, a poor man, should kill it, he becomes liable to certain penalties, and even imprisonment: yet the farmer is obliged to maintain it, although he often has not the smallest interest in its preservation.

The partridge is found in every country, and in every climate; as well in the hyperborean regions, as under the tropical circles. Wherever it resides, it seems to adapt itself to the nature of the climate. In Greenland, it is brown in summer, but in winter it becomes white, and is clothed with a warm down beneath.

The manners and habits of these birds, in many respects, resemble those of the domestic poultry; but their cunning and instincts are much superior. Accustomed to hostile aggression, they practise several little arts of evasion for safety, and frequently not without success.

Partridges make no nests, properly speaking, but lay their eggs on any spot of ground adapted to their purpose. A covey generally consists of from ten to fifteen; and it is supposed that a partridge will live about fifteen years, though it is seldom allowed to reach that period. Corn-fields are the principal delight of this much valued bird, especially while the grain is standing. Here they not only find shelter, but food; and, even after the corn is cut down, they prefer stubble fields to any other.

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## THE GARDEN WARBLER,

Whose song is inferior only to that of the nightingale, is of the same size as that bird, but of a lighter colour. It is found in many parts of Europe, frequenting fields and gardens, and building its nest in a thick bush, or among pea-sticks; the nest is of a very common and flimsy structure, and contains generally four eggs, of a dirty white, blotched with light brown; its most general food is of insects, but it also eats fruits.

### THE REED WARBLER,

Or Reed Wren, is hardly five inches and a half in length : its plumage is brown above, and whitish beneath. This little bird suspends its nest in a very curious manner between three or four reeds, or upon some plant overhanging the water. It is fastened by means of reeds and dry grass, of which materials its outside is chiefly composed ; it is lined with the tufted flowers of the reeds, dry grass, and a few horse-hairs. The nest is very deep within, and thus secures the eggs, which otherwise would be easily thrown out, as the nest is agitated by every gust of wind, often bending nearly to the level of the water. This species is found in the eastern parts of England, but is so shy that it can seldom be discovered.

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### THE EPICUREAN WARBLER,

Or Beccafico, is esteemed as a very great delicacy by the epicures of the continent ; especially during the autumn, when it feeds on grapes and figs, amongst which it commits great havoc. Its length does not exceed five inches ; its plumage is brownish, white beneath, with ashy spots on the breast. It is found in all the continental countries of Europe ; and abounds to such a degree in Cyprus and Candia, that these islands annually export to Italy not less than 1000 or 1200 pots of the birds, filled up with vinegar and herbs.

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### THE BLACKCAP WARBLER

Is nearly six inches long ; its plumage is of a grey, but varying brown above, and light ash colour below ; the hinder part of the head is black in the male, and rust colour in the female. The song of this species is so fine, that it has been by some equalled to that of the Nightingale ; it has not, however, so great a compass. It comes to England early in the spring ; it frequents orchards and gardens, and, in a less degree, woods and thick hedges

Its nest is placed on a low bush or shrub, and is composed of stalks, grass, and wool, with a lining of fibrous roots and horse-hair; the outside is sometimes covered with green moss. The female lays five eggs, of a pale reddish brown, mottled, and sprinkled with a few ashy spots. The parents share the task of sitting; and, if disturbed, will immediately forsake the nest. The Blackcaps feed principally on insects; but will also eat berries, particularly those of the ivy.

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### THE STONECHAT WARBLER

Is more than five inches in length; its plumage is grey, reddish beneath, with a white spot each side the neck, and black head, throat, and wing-coverts. Its habits are solitary, confining itself to dreary moors and commons, where it perches on the uppermost sprays of furze or brambles. The nest is placed at the roots of bushes, or under stones; it is formed of moss and bents, lined with hair and feathers. It is so well concealed, and the parents use such art in decoying persons away, that it is rarely found. The eggs are five in number, of a blue colour, faintly spotted with rufous. It is common in many parts of Europe.

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### THE WHINCHAT

Very much resembles the above species in its habits. Its size is less, and its plumage dusky, with white eyebrows, a white spot on the wings, and yellowish throat and breast. It darts from its perch at flies, on which, together with other insects and worms, it feeds. It frequents furry grounds; and conceals its nest very skilfully on the ground. The nest is formed of dried grass and stalks, with a little moss on the outside, and is lined with fine dried grass: the eggs are six in number, and entirely blue. The Whinchat is highly esteemed for the table, almost equally with the ortolan.

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## THE OSTRICH.

This singular bird, whose elegant plumage is so often a part of female attire, is used in some measure to connect the class of quadrupeds and birds. In its general figure, it has some resemblance to the camel, and is almost as tall; it is covered with a plumage more nearly resembling hair than feathers; and even its internal parts bear as great a similitude to those of the quadruped as of the bird.

The Ostrich is certainly the largest of all birds, appearing nearly as high as a man on horseback. It is usually seven feet from the top of its head to the ground, but from the back it is only four; consequently, the head and neck are above three feet long. From the top of the head to the rump, when the neck is extended in a right line, it is six feet long, and the tail is about one foot more.

The plumage of the ostrich is generally a mixture of black and white, though in some varieties it is observed to be grey. The largest feathers, which are situated at the extremity of the tail and wings, are commonly white; the next row is black and white; and of the small feathers on the back and belly, some partake of both colours. There are no feathers either on the sides, the thighs, or under the wings: the lower part of the neck is covered with still smaller plumage than the belly and back. All the feathers are of a kind peculiar to the ostrich, soft as down, absolutely unfit to help the animal in flight, and still less adapted for defence against external injury.

Again, the upper parts of the head and neck are covered with a very fine clear white hair, shining like the bristles of a hog; and, in several places, are tufts of the same nature, consisting of about twelve hairs, all issuing from a single shaft. From the extremity of each wing is a kind of spur, resembling the quill of a porcupine. The legs are covered with scales, and the bill is short and pointed.

The ostrich inhabits the sandy deserts of Asia and Africa. They often assemble in great flocks, and commit terrible havoc among the corn-fields in the interior of the country, about the Cape of Good Hope; where, as well as in the neighbouring islands, they are very numerous.

It was commonly believed that the female ostrich left her eggs to be hatched by the heat of the sun, and took no notice of her young; but recent observation has proved the contrary. Each male is united to from two to five





*Ostrich*



*Merganier.*





females. These lay in a common nest, sometimes to the number of sixty or seventy eggs, and share between them the task of hatching, in which the male also takes a part. The young are at first very weak, and unable to walk; they are, however, tended by their parent with great assiduity; the old birds not only providing them with food; but defending them from every threatened danger. The ostrich subsists entirely upon vegetation: such is its voracity that it will swallow pieces of iron, glass, and other mineral substances: but these generally prove fatal to it, being unfit for digestion. It may be taken alive, domesticated, and made useful in many ways. The flesh and eggs are highly esteemed as food; the skin, which is very thick, is used by the Arabians as leather; the feathers are highly prized, even among civilized nations, for ornamental purposes; and the shell of their eggs, which resembles ivory, is used in the formation of utensils of ornament and domestic economy.

On these several accounts, the bird is very valuable to the natives, who employ various means of taking it; which is difficult, from its fleetness, strength, and courage. It is sometimes pursued on horseback, but art is necessarily used not to alarm the Ostrich; who, if put to its utmost speed, would soon be lost sight of: the object is to weary it by a persevering chase. When this effected, the bird sometimes turns upon its pursuers with all the fierceness of despair; and at other times it will hide its head as if ashamed, and quietly submit to its fate. When domesticated, it is docile to those with whom it is conversant; but often attacks strangers, running furiously at them to push them down; and if it succeed, pecking at them with its beak, and striking at them violently with its powerful feet. When irritated, it makes a fierce hissing noise, having its mouth open, and its throat inflated: its note of triumph is a species of crackling. In the night it often utters a doleful and hideous cry like the distant roaring of the lion.

When taking the eggs of the Ostrich, the natives are very careful not to touch those which they leave behind, as the parents would infallibly perceive it, and destroy all that remained.

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## THE WAGTAIL.

Wagtails are principally inhabitants of Europe and Asia, where many species are very numerous. They do not hop like most of the small birds, but run nimbly along the ground, and are distinguished by their lively motions and the continued wagging of their long tails. The Wagtails frequent the borders of pools and rivulets, for the sake of the insects and worms which are found there; they have generally a weak flight, and twitter as they go along, perching but seldom; they build their nests on or near the ground.

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## THE WHITE, OR WATER-WAGTAIL

Is about seven inches long; its plumage is of white, black, and grey. It builds its nest among a heap of stones, or in a hole in a wall, or on the top of a pollard tree; it is composed of moss, dry grass, and fibrous roots, interwoven with wool, and lined with feathers or hair. The female lays four or five eggs, white, spotted with light brown and ash. The attention of the parent birds to their young is very great; they continue to feed them for three or four weeks after the young are able to fly, and will defend them from danger with great courage. These little birds will give the alarm on the approach of the hawk, and unite with the swallows in pursuing him; they are very nice about their nests, and carefully remove from them all dirt and extraneous matters. These birds have but a small and insignificant note, but it is constantly repeated, especially during the spring.

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## THE COMMON CUCKOO

Visits the more northern countries in the summer season; it arrives in England about April, and remains till the beginning of July. The Cuckoo eggs have been discovered in the nests of at least twenty different birds, but most frequently in those of the hedge-sparrow. The female generally lays her egg during the absence of the real

owners. Some suppose that the Cuckoo remains in the country, being torpid during the colder seasons of the year. Their peculiar note is familiar to every one.

A species that inhabits Mexico has a cry resembling human laughter, which is considered by the Indians as ominous of evil.

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### THE LONG-BILLED RAIN CUCKOO,

A native of Jamaica, is rather larger than a blackbird, and of sombre hue, has a note resembling the word sacco, and a cry of alarm, like qua, qua, qua. It frequents the woods and hedges, and is so tame that it will permit the negro children to catch it in their hands. Besides insects, it eats lizards, small snakes, frogs, young rats, and even small birds. The snakes it swallows head foremost, the tail hanging out at the mouth till the first received parts are digested. In its gait it leaps like the magpie, and flies only from bush to bush. Some assert that it rears its own eggs.

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### THE INDICATORS, OR HONEY-GUIDES,

Have a solid, conical, and arched beak, and altogether a peculiar appearance; the head is small, and the wings long. Their colours are simple, the size of the larger species is ten and seven inches. These birds feed on honey, for the sake of which they attack the bees' nests often, however, suffering for the theft, as the bees sting them in the eye, which is almost the only accessible part: the bird is not unfrequently killed. The peculiar note they utter, attracts not only men, but the beast called Ratel. The Indicators are natives of Africa; they are said to build in hollow trees: their nests are formed of the fibres of bark, in shape like a bottle, with the neck and opening downwards. It hatches its own eggs, and climbs trees like the woodpecker.

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## THE CROSSBEAK.

The birds of this genus have a strong thick beak, by means of which they break the hardest stone fruit, to feed upon their contents. They are shy and solitary, and but few of them sing. Some are quite small, others eight or nine inches in length. The colours of many species are brilliant; red is prevalent amongst them. The genus includes some well known birds. The Bengal Crossbeak is very common in Hindostan; it is about the size of a sparrow. The prevalent colour is grey, the top of the head is bright yellow, the under parts whitish. It is very docile and faithful, never deserting the place in which its young are hatched. It is easily taught to purchase on the hand of its master; its nest is usually built on some high tree, overhanging some rivulet: it is made of grass, interwoven like cloth, into the shape of a bottle, and so firmly suspended from the branch as to rock with the wind. This nest is usually divided into chambers, and furnished sometimes with fire-flies, which it sticks to the sides with pieces of cow dung.

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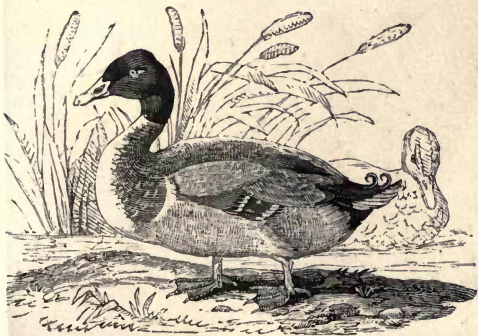
## THE DUCK.

This valuable domestic owes its origin to the Mallard, (the common Wild Duck) and has long been reclaimed from a state of nature. Many of them appear in nearly the same plumage as the Wild ones: others vary greatly from them, as well as from each other, and may be said to be marked with almost all colours; but all the males (Drakes) still retain the unvarying mark of their wild original in the curled feathers of the tail. Long domestication has, however, deprived the Tame Duck of that keen, quick, and sprightly look and shape which distinguishes the Mallard, and substituted a more dull and less elegant form and appearance in their stead.

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*Promerops.*



*Duck.*









*Penguin.*



*Buzzard.*

## THE PENGUIN.

THIS genus has the bill straight, strong, bent towards the point, and furrowed on the sides; the tongue is covered with strong spines, pointing backwards. The wings are small, and covered with small feathers, as well as the rest of the body, on which they are placed close and smooth, like scales; the legs are short and thick, placed very near the vent; the toes four, all forwards; the tail very stiff, and of shafts scarcely webbed. The Penguins frequent the frigid and temperate zones of the southern latitudes. Their bodies are well covered with feathers, and being generally very fat, they feel but little cold. They are found on the ice, at a great distance from land.

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## THE CRESTED PENGUIN

Is about twenty-three inches in length. Its bill is red; the plumage of the head, neck, back, and sides, is black; of the lower parts of the body, white; over each is a pale yellow stripe, the feathers of which, in the male, are lengthened behind into a crest four inches long; the wings are black, lined and bound with white; the legs are orange.

This Penguin is found in many coasts of the southern ocean. They are called by sailors, hopping penguins, or jumping jacks, because they frequently jump from the water to the height of three or four feet. They are stupid birds, permitting a person to advance so as to knock them down with a stick; when provoked, they erect their crest in a very beautiful manner. This Penguin makes its nest among those of the Pelican tribe, and lives with them in tolerable harmony. It lays one egg, white, and larger than the duck's: it is deposited in a hole in the earth.

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## THE BUZZARD.

THE length of this bird is about twenty-two inches, and the full expansion of its wings upwards of fifty. It is the most common among all birds of the hawk kind in

England ; breeds in extensive woods and lays two or three eggs. Its colours are liable to considerable variations ; but it is unnecessary to describe a bird so well known.

The Buzzard is very sluggish and inactive, remaining perched on the same bough for the greatest part of the day, and always near the same place. It feeds on birds, rabbits, moles, and mice ; and, when impelled by hunger, will make a meal on frogs, earth-worms, or any sort of insects.

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### THE EIDER DUCK

Is less than a Goose, being one foot ten inches in length. The plumage is chiefly white ; the bill, top of the head, under parts of the breast, tail, and quills, are black ; over the latter hang the white scapulars, which are curved at their extremities : the neck is on either side of a pale pea-green, and the legs are of a dull green colour. The plumage requires three years to bring it to perfection. The female is of a reddish brown colour, marked with black. The Eider Duck has been found in the highest latitudes yet explored. It is frequent in the Hebrides and Ferroe isles ; and in America comes as far south as New York. The female lays four or five eggs, of a glossy pale green ; these she deposits in a nest of the down plucked from her own breast. The nest is plundered for the sake of the down, which is the softest and warmest substance known. The female will lay a second, and even a third time ; but for the third nest is obliged to apply to the male for down. The pairs are very constant to the same building spot. The Greenlanders kill them in the water with their darts : their flesh is said to be much esteemed. They are supposed to live to a great age, and become quite grey.

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### THE MUSCOVY DUCK

Is two feet in length. Its bill, legs, and a rough skin about the eyes, are red ; the top and sides of the head black ; the back and tail are of a glossy gold-green, except the outer feathers of the latter, which are white ; the wings, too, are partly tipped with golden green ; the rest of the body is white, varied on the throat and fore part of

the neck with black, and on the other parts with a prevalence of brown. This bird is pretty commonly domesticated. It came originally from Brazil, and derives its name from a musky odour, which it exhales. The flesh is thought good, and is more abundant than on the common Duck. The bird is hardy.

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### THE MALLARD, OR WILD DUCK,

Is nearly two feet in length. The plumage of this bird is beautifully varied with glossy, changeable green, pure white, finely barred with brown, black, chesnut, and brown; on the converts is a fine spot of lucid violet-green. The female is very plain, of a pale reddish brown colour, spotted with black. It is of migratory habits, but not universally so, and inhabits the tropical and temperate zones. Great numbers are caught in decoys, in the marshes of Lincolnshire. The Wild Duck breeds in the spring, and lays from ten to sixteen eggs: the young go into the water as soon as they are hatched. The parents use considerable art to preserve their young, and seldom build close to the water. They are much esteemed for the table, and are caught by various means. Sometimes the sportsman attracts them within gunshot, by exhibiting tame ducks confined in wicker cages; sometimes they are caught while swimming by hooks, baited with sheep's lights. A very curious method prevails in the East: a man, having covered his head with a calabash, wades into the water as far as his chin, and approaches a party of ducks; these being accustomed to see the calabashes float down the rivers, are not alarmed, and suffer themselves to be dragged under the water by the legs, an easy prey to their disguised enemy. On the river Ganges the natives substitute to the calabash one of the earthen pots in which they boil their rice, and which they never use a second time, considering them then as defiled. Ducks are very much used among the Chinese, who hatch them chiefly by artificial heat. The young are at first fed, and then consigned to the care of an old duck, and placed on a raft in the river, from which they come to feed, and return at command.

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## THE TITMOUSE.

The birds of the *Parus* or Titmouse genus are noted for the curious construction of their nests, which are composed of the softest materials, and often fastened to the end of a branch overhanging the water, so as to be secured from the attacks of quadrupeds and reptiles. They are very prolific, some of them laying nearly twenty eggs; great industry is exerted in providing for their numerous offspring. They are lively and active little birds, possessing such strength and courage as to attack birds three times their size. When they have conquered, they pierce the skull to obtain the brains; they are fond of flesh, and particularly of fat. Their food chiefly consists of insects, in pursuit of which they pick off the early buds of spring, or in summer search the crevices of trees. They are common in the old world, and many parts of the new.

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## THE BLUE TITMOUSE,

A well-known native of Europe, is about four inches and a half in length. The upper parts of the body are olive green, the lower yellow; the crown of the head and tail are blue, as well as the principal wing-feathers; it has markings both of black and white. This bird is supposed to be hurtful to orchards and gardens, by picking off the buds in search of insects. It eats both flesh and grains; its nest is made in the hollow of trees: the female is very careful, and will vigorously resist if attacked while sitting.

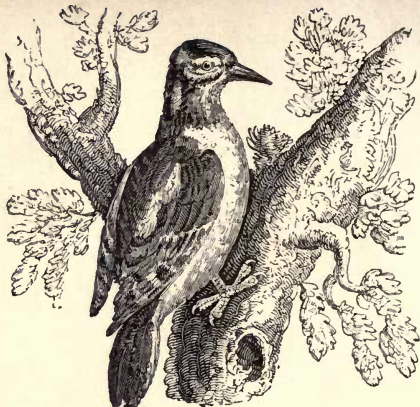
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## LONG-TAILED TITMOUSE.

The body of it is only two inches in length, while its tail measures three. It is varied with white, rose-coloured, and black, with a white crown and tail. Its nest is usually firmly fixed in the fork of some bush or tree; it is of an oval form, with a small entrance at the side. The outside consists of moss, wool, and dry grass, firmly woven together, and is thickly lined with feathers; the







*Woodpecker.*



*Pheasant.*

bird is four or five weeks in constructing it. The bird is active and restless, singing sweetly in the spring. The young remain with their parents during the winter, and often sleep huddled together on a branch, so as to appear like a ball of down. This practice is common amongst the small birds.

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### PENDULINE TITMOUSE.

It is of a reddish brown colour, and suspends its nest at the extremity of some weak branch that hangs over the water; the entrance is generally opposite the water. It is constructed of the down of the thistle, poplar, and willow, strengthened with the fibres and roots of plants, the whole being lined with the softest materials. These birds are found in many parts of Europe.

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### THE RED-HEADED WOODPECKER.

THIS bird is well known as an inhabitant of the American woods, and as a frequent visitor of the cherry-trees in the season of fruit. He makes his nest by digging with his beak into the trunk or limb of some decayed tree, forming a circular cavity, in which the eggs are deposited and the young ones hatched.

Although he is fond of fruit, and often devours great quantities of Indian corn, when in the milk, yet he lives chiefly on insects. His sagacity in finding them is astonishing. He climbs along the trunks of trees, and discovers by the appearance of the bark where the insect is lurking. If he is doubtful, he drums and rattles with his beak vehemently on the spot, and his acute ear distinguishes his terrified victim within, shrinking to his utmost retreat, where his pointed and barbed tongue soon reaches him. The multitude of caterpillars, bugs, and worms, which one of these birds devours in a day, is surprising.

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## THE COMMON PHEASANT.

Next to the peacock, the pheasant, both for the vivid colour of its plumes and their delightful mixtures and variety, is the most beautiful of the winged tribe. No effects of the pencil can produce any thing so glossy and brilliant, or so delicately blended. It is reported that Cræsus, king of Lydia, when seated on his throne, in all the pomp and costume of the eastern splendour, asked Solon if he had ever seen any thing so magnificent. The philosopher, unawed by Majesty, and priding himself on his native freedom and simplicity, replied; that, after having seen the beautiful plumage of the pheasant, he could be dazzled by no other finery.

The pheasant, however, is not only beautiful to the eye, but is also a peculiar delicacy for the table; but, as if shunning the protection of men, it loves to inhabit the thickest woods and most unfrequented parts of the forest. Though removed from its native warm and genial climates, it still preserves its innate predilection for freedom; and now lives wild and untamed among us, ornamenting our parks and forests; where it feeds on acorns, berries, and grain.

In a wild state the hen pheasant lays from eighteen to twenty eggs in a season; but, in a state of captivity, she seldom produces more than ten. In a state of nature, she hatches and rears her young with resolution, vigilance, and patience; but, when kept tame, she becomes remiss in these duties, and a common hen is generally made her substitute.

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## THE CRESTED LAPWING

Is about thirteen inches and a half in length: its plumage is very elegant; the head and breast are of a glossy black: the back of green gold; the under parts white; the tail white and black. It is common in most parts of Europe, particularly in Holland. It frequents marshy places, whether in the vicinity of rivers or not. In the winter it associates in flocks of four and five hundred or more, and is at that season much esteemed for the table; the eggs also are considered a delicacy. The female lays four eggs, in a hole in the ground: they are of an olive brown

colour, blotched with black. The young run about as soon as hatched, but they are not able to fly for some time; the old ones lead them to their food, but do not feed them. The parents are very watchful of their young, and use no little art to draw off the attention of any one, who has approached their nest, feigning to be disabled, and ready to fall into their hands. They feed chiefly on worms, and are useful in a garden, to clear it of these reptiles. The Lapwings are lively and active, ever on the wing, and flying very high. Their cry is rather plaintive, resembling the syllable pee-wit. When kept in a garden they become very familiar: it is necessary to feed them with bread at the season that their natural food fails them.

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## THE ALBATROSS.

THIS bird is larger than the swan; its length is from three feet and a half to four feet; its wings, when extended, measure ten feet. The bill is of a dirty yellow; the top of the head ashy; the body white, crossed with black lines on the back and wings, and spotted behind; the greater quills are black; the tails dusky; legs flesh-coloured.

Albatrosses are found from the tropics to the highest latitudes, yet explored; associating in vast flocks, they prey upon the molluscæ and fish, not confining themselves to the very small. They are caught by means of hooks baited with fish, not for the sake of their flesh, but for their bones and intestines, which serve many different purposes. Their cry is harsh, resembling the braying of an ass. Their nest resembles that of the flamingo; the eggs are white, with some dull spots; they are four inches and a half long. While the female sits, the male supplies her with food; she is then so tame, that she may be pushed off her nest. The hawk is a great enemy to the Albatross, darting upon the egg and carrying it off, if the female rises for a moment from her nest: there is also a species of gull which persecutes the Albatross on the wing. The young have no sooner left the nest than the penguin takes possession of it, to hatch her eggs.

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## WHITE-RUMPED WHEATEAR.

The only indigenous species, is six inches and a half in length; it is of hoary grey above, and white beneath, both varied with black. These birds are very abundant in Britain, and make their first appearance in May. They are not gregarious, excepting in autumn. So numerous are they in the neighbourhood of East Bourne, in Sussex, that more than 1800 dozens are annually taken there: they are so timid, that they run in the way of danger at the slightest alarm; even a passing cloud will move them. Upon this timorous disposition is founded the manner of entrapping them: two turfs are placed edgeways, in the form of the roman T; and to each end is attached a horse-hair noose, fastened to a small piece of stick. The fearful Wheatears, upon the slightest danger, run into these holes and are certainly caught. They are much esteemed, and are chiefly destined for the London market, for which great numbers are potted; they are in as great repute among the English epicures, as are the Ortolans with those of the continent. They build under some clod of turf, or in a deserted rabbit-hole; and form their nests of dry grass and moss, mixed with wool and rabbit-fur, very neatly put together, and lined with feathers, hair, and wool: the eggs, five or six in number, of a pale blue colour. The White-rumped Wheatear has a pretty song, which it sometimes utters on the wing; it feeds on insects, and when they fail, on worms; this bird is found in most parts of Europe and Asia.

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## THE GOATSUCKER, OR CHURN-OWL.

THIS bird, which some place among the family of swallows, is about ten inches long, and twenty-two broad. Its colours are plain, but they have a beautiful effect from the elegance of their disposition, consisting of black, brown, grey, white, and ferruginous, arranged in streaks, spots, and bars. The male is distinguished from the female by an oval spot near the end of each of the three first quill-feathers, and another in the two exterior feathers of the tail.

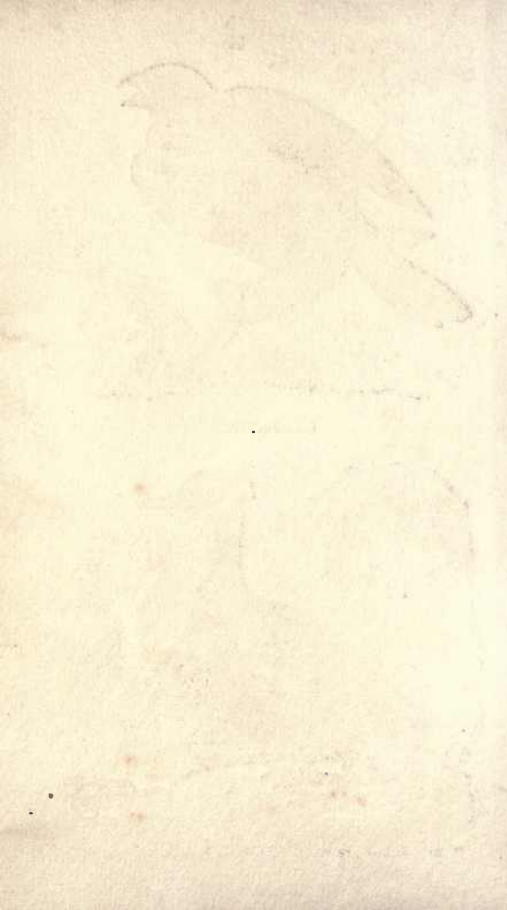
The Goat-sucker flies chiefly by night, and continues



*Goatsucker.*



*Smew.*





but a short time in this island ; appearing about the latter end of May, and retiring from every part of Britain by the end of September. Its notes resemble the noise of a large spinning-wheel, and the sound is very shrill and loud. It receives its name from its fancied property of sucking the teats of goats.

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### THE SMEW.

THIS bird measures, from the point of the bill to the end of the tail, near eighteen inches ; and from the extremity of each wing, when extended, upwards of two feet ; and weighs about a pound and a half. It has a fine crest upon the head, which falls down toward the back part of it, under which, on each side of the head, is a black spot ; the rest of the head and neck are white, as are the under parts of the body ; the back and the wings are of an agreeable mixture of black and white. The tail is about three inches long, of a sort of dusky ash-colour, the feathers on each side shortening gradually. The bill is of a lead colour, it is somewhat less than the generality of the duck kind, a little hooked, with large open nostrils ; the legs are much of the colour of the bill.

The female of this bird has no crest ; the sides of the head are red, the throat white, and the wings of a dusky ash-colour ; in other respects it agrees with the male. They feed on fish, but are very rarely seen in England, except in very hard seasons, and then not more than three or four of them together.

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### THE GREENFINCH

Is rather larger than a sparrow, of a yellowish green colour, slightly varied with yellow. It occurs commonly in most parts of the continent, and builds its nest in a low thick bush or hedge, and forms it of dry grass, lined with hair, wool, and feathers ; it is very careful of its eggs. This bird is remarkably docile, becoming easily familiarized, and learning the songs of other birds.

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## THE CHAFFINCH

Is of a varied brown colour, with a whitish abdomen, forming a very beautiful mixture. It is very common in England, and the male is sometimes caged for its song. It dwells in pairs during the summer, feeding on insects; but in winter, is gregarious, and eats grains.

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## THE TUNEFUL MANAKIN

Is of dusky colour with a blue head and neck, and yellow forehead: the under parts are orange. Its song is said to comprehend the complete octave often repeated in successive notes. It is common in St. Domingo.

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## THE LINNET,

Or greater Redpole Finch, is of a varying brown colour, with a red forehead, and some variegations of white and black. These birds unite in flocks during winter, feeding on seeds, particularly flax. Their song is very fine, and they may be taught to articulate words with great clearness: they are very docile. It is found in Europe and North America. A lesser species is more abundant, and feeds particularly on the seeds of the alder.

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## THE PARROT.

The numerous and splendid genus *Psittacus*, or Parrot, is chiefly confined to the regions within the tropics. From their active and imitative disposition, they have been termed the monkeys of the birds. The form of their tongue, which is flat, round and fleshy, enables them to articulate better than the other birds. The upper mandible is moveable, a remarkable circumstance, and their feet are formed for climbing. They eat fruits, and live in pairs, depositing their eggs, two in number, in the holes of

trees. They sometimes assemble in large flocks. Some are called Parrots, others Parakeets, Maccaws, Cockatoos, or Lories.

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### THE SCARLET MACCAW

Is a native of South America, and the large West India islands, where it frequents the woods. The tail is nearly as long as the body, and from its tip to the end of the bill, the bird has measured thirty-six inches. Its prevailing colour is scarlet, its wings are blue with yellow covers, and it has white cheeks. Flocks of these birds inhabit the swampy savannahs of South America, where they fly about screaming loudly. They fly the best of all the tribe, and generally perch on the topmost branches of the trees. They build in holes in old trees, enlarging them to their need, and lining them with feathers. They breed twice a year; both parents sit on the eggs. If taken young, they are easily tamed and taught to speak.

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### THE COCKATOOS

Vary in size, and have generally large pointed crests, which they erect at pleasure. Several species having only on the inside of the crest feathers, some fine colour, such as crimson, rose colour, yellow, orange, &c.

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### THE GREY PARROT

Is too frequently seen in this country to need description; it is remarkable for its docility, vivacity, and distinct articulation. It appears pretty universal in the tropical regions, and is mostly imported into England from Angola and Congo. Many are the anecdotes told of the sagacity of this bird; it may truly be trained to say many extraordinary things.

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## THE AMAZON PARROTS,

Principally from the banks of the river Amazon, are about fourteen inches in length; their colour is green, diversified with blue, red, and yellow. They are capable of much instruction, of which Locke relates a remarkable instance.

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## THE DAMASK PARROTS,

Of an olive brown colour, varied with sea-green and orange colour, are natives of Southern Africa. They assemble in large flocks to bathe, and gambol in the most playful and noisy manner.

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## THE TOUCANS

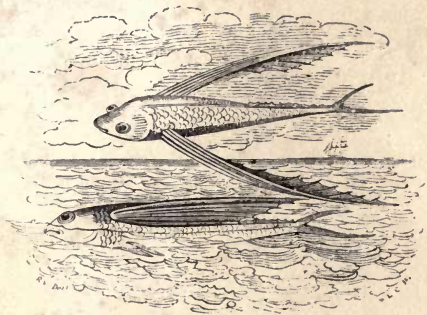
are natives of South America; like the horn-bills they are distinguished by their large bills, which in some species nearly equal the size of the whole body. These bills are of a light texture, and in the living animal yield to the pressure of the hand. Both mandibles are serrated; the tongue is shaped like a long feather; in their native state they feed on fruits, but in captivity will eat animal food. Their length varies from twelve to twenty inches; their colours in general are brilliant, and strongly contrasted.

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## THE FLYING FISH.

THIS fish is slender and long, with a large staring eye. The fins on each side of the back are so long and wide as to answer the purpose of wings. These not only assist it in flying, but enable it to swim through the water with amazing velocity. Aided by them, he flies nearly to the distance of a gun-shot before he touches the water; and when he has slightly dipped, in order to rest himself, mounts up again.

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*Flying Fish.*

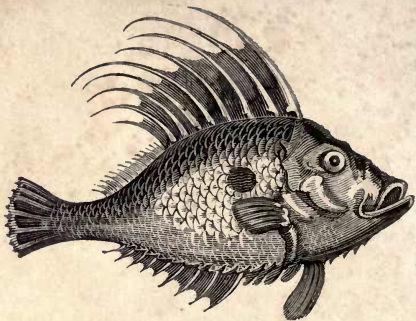


*Flying Fish.*









*John Doree.*



*Flying Fish.*

## THE JOHN DOREE.

This fish is greatly esteemed for its delicious flavour ; it is said that Quin, a famous actor in England, went from London to Plymouth, that he might eat it in perfection and abundance.

The colour of a John Doree is a dark green, marked with black spots, with a golden gloss. It is this which gives him the name of Doree, that word being the French for *gilded*.

In Britain, it was long before this fish was regarded as eatable. The celebrated comedian, Mr. Quin, first introduced it to our tables ; ever since which it has constantly maintained the reputation of being a delicious viand notwithstanding its forbidding form and aspect. It was formerly supposed to be confined to the southern seas of this kingdom, but it has been found likewise on the coast of Anglesea. Some have been taken that weigh twelve pounds ; and larger still are found in the Bay of Biscay and the Mediterranean.

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## THE DOLPHIN.

The dolphin has an almost straight shape, the back being very slightly incurvated, and the body slender : the nose is long, narrow, and pointed, with a broad transverse band, or projection of its skin on its upper part. It has twenty-one teeth in the upper, and nineteen in the lower jaw, somewhat above an inch long, conic at the upper end, sharp pointed, and bending a little in ; they are placed at a small distance from each other ; so that, when the mouth is shut, the teeth of both jaws lock into each other. The spout-hole is placed in the middle of the head ; the skin is smooth ; the colour of the back and sides dusky ; the belly whitish. It swims with great swiftness, and preys on fish. The dolphin is larger and more slender than the porpoise, measuring nine or ten feet in length, and only two in diameter.

All this species have fins on the back ; very large heads, like the rest of the whale kind ; and resembles each other in their appetites, their manners, and conformation, being

equally voracious, active and roving. No fish could escape them, but for the awkward position of their mouth, which is placed in a manner under the head; and their own agility is so great as to prevent them from being often taken.

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## THE PORPOISE

Very much resembles the dolphin, and is of the same genus. Its length, from the tip of the snout to the end of the tail, is from five to eight feet; and the width about two feet and a half. The figure of the whole body is conical; the colour of the back is deep blue, inclining to shining black; the sides are grey, and the belly white. When the flesh is cut up, it looks very much like pork; but, although it was once considered a sumptuous article of food, and is said to have been occasionally introduced at the tables of the old English nobility, it certainly has a disagreeable flavour.

Their motion in the water is a kind of circular leap; they dive deep, but soon again rise up in order to breathe. They are seen nearly in all seas, where they sport with great activity, chiefly on the approach of a squall.

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## THE SALAMANDER

Is found in many parts of Germany, Italy, France, &c. It delights in moist and shady places, and is chiefly seen in rainy weather. In winter it hides in the hollow roots of old trees, in holes under ground, or in walls. The colours of the salamander are remarkable; being of a deep shining black, with large oblong patches of bright orange colour. In many parts of its body are found large open pores, whence oozes a peculiar liquid, destined to soften the skin; this appears more suddenly, and in larger quantities, when the animal is disturbed; it is white, slightly caustic, and can be ejected to a considerable distance. This circumstance may have given rise to the fable of the salamander's being so cold in itself, as to defy the power of fire; like all other moist animals, it requires

a longer time to be acted on by heat than the drier creatures. Its usual length is about seven or eight inches, but it is sometimes much longer. The salamander feeds on insects, and can live in water, often frequenting stagnant pools. It has been accounted poisonous, but it is quite incapable of inflicting any wound; it appears from experiment, that it has poisoned the grey lizard, when bitten by it, probably from the lizard's having swallowed, in the bite, a large quantity of the fluid which oozes from the body of the salamander. It is a viviparous animal, the eggs being hatched internally, and the young produced alive. The number of young at one birth sometimes amounts to thirty or forty.

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### THE COMMON WATER-NEWT

Is a British species, frequently found in stagnant waters; it is about three inches and a half, or at most four, in length. The general colour of the male is olive brown, beautifully marked with round, distinct, black spots: the abdomen is orange-coloured, less distinctly marked. The female is much less beautiful than the male, being of a pale yellowish-brown, less distinctly spotted. The male is also distinguished by a crest, which runs along its back, and which is so thin, as to form an excellent subject for observing, by the help of the microscope, the circulation of the blood. The water-newt breeds early in the spring, and deposits her spawn in small strings, or clusters. The larvæ are soon hatched, and for a long time are furnished with three branched fins on each side the head; which, together with the shortness of its feet, give it the appearance of a small fish. These fins assist the animal in respiration, and disappear as it grows older. The water-newts frequently cast their skins, and possess, in a high degree, the power of reproducing parts that have been cut off, and of retaining life in unfavorable circumstances. They are, however, easily killed by salt, whether applied wet or dry.

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## THE CHAMELEON,

So often mentioned by the poets, is a native of India, Africa, and the warmer parts of Spain and Portugal. This animal has the singular property of changing its colour from bluish green or grey, to yellowish green and yellow. These changes appear to depend on the different states of the body, the first mentioned belongs to its most healthful condition. The animal is about ten inches long, very thin, of a ghastly form, and covered all over with a kind of wart. Its tail is long and prehensile. Its tongue can be extended or withdrawn at pleasure; it is used to catch the insects on which the chameleon feeds. This animal can remain a very long time without food, from which circumstance it has been falsely said that it can live on air alone. The toes of each foot are divided into two divisions, so that it can completely clasp a branch, &c. The chameleon is quite harmless.

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## THE GECKO

Is a native of Africa, and the warmer parts of Asia and Europe. It is said to derive its name from its voice, which is like the word uttered in a shrill tone. Its length is rather more than a foot; it is of a thicker and stouter form than most lizards, has a flat triangular head covered with scales, a wide mouth, large eyes, small teeth, and a broad flat tongue; the limbs are well proportioned, and the feet broad; the tail is generally longer than the body, and is marked in regular divisions like joints. The general colour of the animal is a pale brown with a few dusky blue variegations, but its colours brighten very much in tropical regions. The gecko inhabits dark holes, caverns, old walls, hollow trees, &c.; it is chiefly seen abroad in rainy weather. It is thought to be poisonous on account of a caustic fluid oozing from its feet, and adhering to any fruit or other eatable over which it may happen to pass, and which if swallowed causes unpleasant symptoms.

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*Common Whale.*



*Sea Unicorn.*





## THE WHALE.

The whale is an unwieldy ill-shaped animal; the head constitutes one third of its length. There are orifices in the middle of the head, from which it spouts water to a prodigious distance, and with great noise especially when disturbed. The eyes, which are not larger than those of an ox, are placed far back in the head; which enables the animal to see objects both before and behind. The tail is broad and semilunar.

The colour of the whale is not uniform, but admits a great variety of shades, which may be occasioned by age or other accidents. The substance, known by the appellation of whale-bone, adheres to the upper jaw, and is composed of thin parrallel plates, some of which are four yards long.

Though the whale is one of the largest of animals, it is at the same time one of the most innoxious. Instead of preying on the other inhabitants of the deep, it appears to subsist solely on insects of the medusæ kind. Against its adversaries of the deep, however, it may prevail by force, or escape their malice by artifice; but the lords of the creation pursue it with dexterous and successful hostility, stimulated by mercantile avarice, or a more laudable wish to supply the wants of human life. It is well known that a number of ships are fitted out annually for the whale fishery on the coast of Greenland, and in the South Sea. The animal is pierced with a harpoon, to which a long rope is affixed, kept coiled up, and allowed to run off a great length: as often as the wounded whale rises to respire, it receives another harpoon; till at last it sinks exhausted with fatigue, pain, and loss of blood. The blubber, or fat, is then cut up, and put into barrels, and is afterwards melted into oil. The flesh is of no value, according to our taste: but some of the hyperborean nations consider it as a great delicacy, and even a dead whale, thrown on their shores, as a special blessing of Providence.

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## THE SEA UNICORN.

In size this animal is inferior to the whale, seldom exceeding sixty feet in length, and the body is more slender

and less greasy. Its most distinguishing character, however, is its horn, which projects forward from the upper jaw, about twelve feet in length.

Of all the variety of weapons with which Nature has furnished her animal offspring, none is more formidable: it is perfectly strait, about three or four inches in diameter, tapering to a point, and wreathed in the most curious manner. It is whiter, harder, and heavier than ivory, and is capable of piercing the hardest substances; but when the animal ventures to strike this instrument, which it has received for its defence against other tenants of the deep, into the side of a ship, it generally loses its life for its temerity.

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### THE FLYING DRAGON,

In spite of its formidable name, is a harmless lizard of very peculiar form. Its length is about nine or ten inches, or at most a foot; its head is furnished with a triple pouch, one point of which hangs below the throat, and one on either side. The head itself is of a middling size; the neck is small; the body and limbs slender; the flying membrane, which extends from the hind to the fore legs, is of the form and structure of a fan; the whole is covered with small scales. The colour of the animal is an elegant pale blue, or bluish grey, with dusky bars on the back and tail; the wings are marked with patches of black, brown, and white; and of this last colour is the border of the wings. The under surface of the animal is a pale brown. It is an inhabitant of many parts of Asia and Africa, and wanders about the trees, springing from bough to bough, like the flying squirrels, or even bats. It feeds on insects, and is of an inoffensive disposition.

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### THE MURÆNA,

Which was considered by the Romans as one of the greatest luxuries of their table, is found in great abundance on several of the coasts of the Mediterranean, where it attains a size somewhat superior to that of the Eel. Its

colour, a dusky greenish brown, is thickly variegated with marks of a dull yellow, speckled over with brown, having altogether somewhat the appearance of a net-work. The head is small; the fins, which are united like those of the Eel, are covered with the skin of the body, and of a dusky colour, with white spots. The *Muraena* can live either in fresh or salt water, but is chiefly found at sea. In its manners it resembles the Conger, being extremely voracious. The ancients used to keep it in reservoirs, where it is said to have become so tame as to answer its master's call to summon it to its food. Pliny relates that one Vedius Pollio used to throw his offending slaves into the reservoir to be devoured by the *Muraena*.

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### THE ELECTRICAL GYMNOTE,

Is a native of the warmer regions of America and Africa, where it inhabits the larger rivers. Its general appearance is like that of a large Eel; but its body is thicker, and its colour a uniform dark brown. Its usual length is from three to four feet; but it has been found six, seven, or even ten feet long. The Electrical Gymnote has no teeth, but is provided with a much more surprising means of securing its prey. This is no other than a peculiar organ, performing the office of an electrical machine, with which the animal is able to give a very smart shock, with effects similar to those of a charged jar, being communicable through a circle of persons standing with joined hands, &c. The violence of the shock varies with the size of the Eel, and is capable of killing or benumbing the fish on which the animal preys; it is particularly powerful when he is irritated, and capable of violently affecting the human frame. Humboldt relates, that when travelling in South America, he saw horses and mules killed by the strokes of the Gymnote, upon being driven into a pool where those fish abounded. From his account, it appears that the animal is not able to continue to give blows of equal force; the strokes, when rapidly repeated, becoming weaker and weaker.

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## THE PERCH.

The perch is a gregarious fish, commonly taking up its residence in deep holes, and gently flowing streams. It is extremely voracious, and bites with such avidity, that, if the angler chances to fall in with a shoal, he seldom fails to catch numbers. It has been commonly supposed that the pike will not attack this fish, for fear of its thorny spines, which it erects on the approach of danger; but, though this may be literally true with respect to the large fish, it is well known that small ones offer the most alluring bait that can be laid for the pike.

The body of the perch is deep; the scales are extremely rough; and the back is much arched. The colours are exquisitely beautiful; the back and part of the sides being of a deep green, marked with five broad black bars pointing downwards; the belly is white, tinged with red; the ventral fins are of a rich scarlet colour; and the anal fin and the tail are of the same hue, but somewhat fainter.

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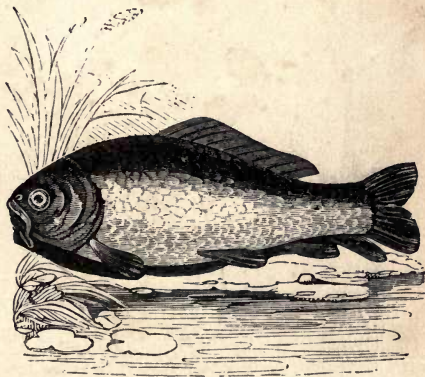
## THE CARP.

This fish, though now so well known, was not introduced into this island till about the year 1514. It is the most suitable of all others for stocking ponds, on account of its quick growth and prodigious increase. The body is thick; the scales very large: the jaws are of equal length; and on each side of the mouth is a single beard, and above these are two more, but shorter. The average weight is about five pounds, but some have reached twenty. Carps are long-lived; and Gesner makes mention of one that was known to reach a hundred years. They are capable of existing a considerable time out of their native element; and have been fed by a particular process, after being taken from the pond. They are excessively cunning, and shy of taking a bait; though, during spawning time, they will suffer themselves to be tickled, handled, and caught with facility.

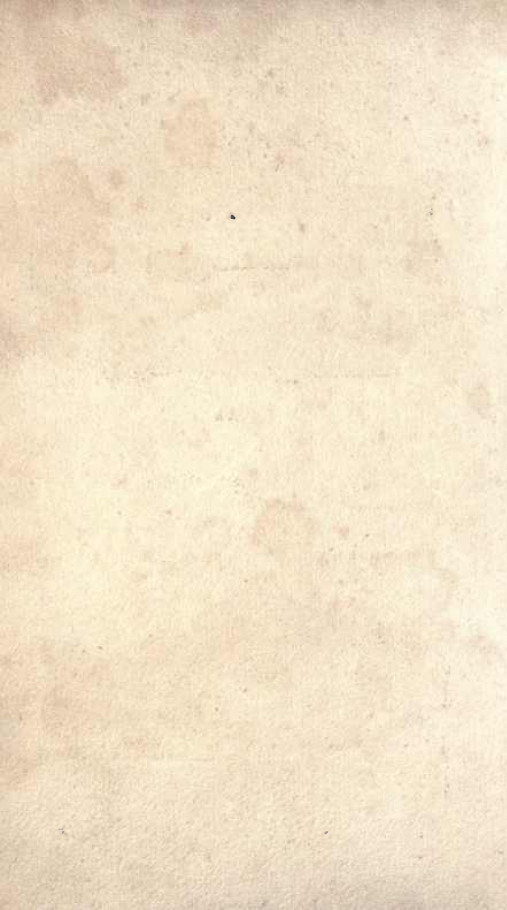
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*Perch.*



*Carp.*



## THE COMMON COD,

Which furnishes so considerable an article of food, inhabits the Northern seas in immense shoals, migrating, at certain periods, to the coasts of Europe and America in succession. The general place at which the Cod fish meet is the Banks of Newfoundland. They prefer situations such as these, for the sake of the multitudes of worms which are found in their sandy bottoms. They deposit their spawn in the Polar seas. They are taken in abundance on the south and west coasts of Ireland; and swarm off Norway, the Orkney and Hebrides' Islands, and in the Baltic; farther south the numbers decrease, scarcely any being found so low as the Straits of Gibraltar. The Cod Bank forms the riches of Newfoundland. It is about 500 miles long and 300 broad, and is known to the seamen from the swelling of the sea and the mists with which it is covered. The water on the banks is usually from twenty-two to fifty fathoms deep, and at its edge from sixty to eighty; it is much the same on the smaller banks. Extensive as are the fisheries on this bank, they are entirely carried on by the hook and line, baited with herrings, a small fish called capelin, the shell-fish called clams, or pieces of sea fowl. The fishery employs no less than fifteen thousand British seamen, and affords employment to a still greater number to home, in the different manufactures which supply the fishery. The fish, when taken, are cleaned, salted, dried, and carried to various parts of the European continent. The Cod grows to a very large size; one taken on the British coast was five feet eight inches long, five feet round the shoulder, and weighed seventy-eight pounds. The usual weight of those caught in the British seas is from fourteen to forty pounds: those of a middling size are most esteemed for the table. The Cod is moderately long, with a thick belly, middling-sized head, and large eyes. The teeth are very numerous. The dorsal and anal-fins are rather large, the pectoral rather small, the ventral small and slender; the tail is of moderate size, and even at the end. The usual colour is an ashy grey, generally spotted with dull yellow; the belly is white or silvery. The food of the Cod consists of small fish, worms, and shell-fish, &c.; its digestion is so powerful as to



dissolve most of the shells it swallows. It is very voracious, catching at every thing offered to it. The fishermen usually pierce the air-bladder of the fish, to prevent its rising in the well of the boat. The sounds, salted, are reckoned a great delicacy. The Icelanders prepare a kind of isinglass from some parts of the fish.

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## THE CHALCIDES

Is a native of Africa, and the warmer parts of Europe; it is found of different sizes, from a few inches to more than a foot, its usual length, however, is about eight or nine inches. The front of its head is covered with large scales, its body is like that of a snake, but its tail is very taper. The legs are very short, and the feet still more so, ending in minute claws. The living animal is said to be of a brassy cast of colour. It is of a harmless nature, frequenting moist places, moving slowly, and feeding on worms, insects, &c. It is a viviparous animal, and is said to be very productive.

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## THE TROUT.

THE colours of this fish vary extremely in different waters, as well as the flavour of its flesh; in every place the latter is much esteemed. The body is long, the head short and roundish, the tail very broad, and the mouth large.

This fish seldom exceeds four pounds in weight; and in general it is much smaller. Notwithstanding it is so universally diffused, and its flesh so extremely delicate, we do not find it mentioned by any of the ancients, except Ausonius. There is a species called the white trout, found in the river Esk, and some other streams, whose flesh when dressed becomes red, and is more valued than that of the common kind.

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## THE SOLE.

THIS is one of the most delicate of our British fishes, and is common on all our coasts, whence it is sometimes called the queen of the sea; those on the western shores, however, attain the largest size. They usually keep much at the bottom of the deep, where they feed on small shell-fish, and are drawn up with the hawl-net.

The irides of the sole are yellow; the pupils of a bright saphirine colour; and the scale small and very rough. The upper part of the body is of a deep brown hue, and the under part is white. The lateral line is straight, and the tail rounded at the extremity.

Though the flesh is delicious and white, that of the middling sized fishes is by far the best. The chief fishery for soles is at Brixham, in Torbay. By an ancient law of the Cinque Ports, no one was to take them from the first of November to the fifteenth of March, neither were they to be molested from sun-rising to sun-setting, that they might enjoy their night-food.

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## THE MACKEREL.

The nose of this fish is taper and sharp pointed: the body is slightly compressed on the sides, but towards the tail grows very slender, and somewhat angular. The colour of the back, and sides above the lateral line, is a fine green varied with blue, interspersed with black lines pointing downwards; and beneath the line, the sides and belly are silvery. In short, the mackerel is a most beautiful fish when alive, and all its colours are brilliant; but no sooner is it removed from its native element, than its lustre begins to fade.

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## THE CHUB.

THE chub is a very coarse fish, and extremely full of bones. The body is oblong, rather round, and the head is short and thick. The upper part is of a dusky green colour, the sides are silvery, and the belly is white.

This fish frequents the deep holes of rivers, and during the summer season commonly lies on the surface of the water, beneath the shade of some tree or bush. It is very timid, darting to the bottom on the least alarm, but soon resumes its former situation. The flesh is in little esteem, and the weight seldom exceeds five pounds.

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## THE TORPEDO, OR ELECTRIC RAY.

This is a very wonderful marine animal, endowed with an electric power, for which it is provided with a natural apparatus. It gives a smart shock to a person who handles it, similar to that produced by the electrical machine. The body of this fish is nearly circular. It is sometimes so large as to weigh between seventy and eighty pounds. The skin is smooth, of a dusky brown colour, and white underneath.

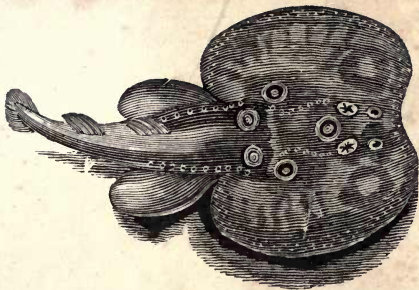
The shock imparted by the touch of the Cramp-fish, as the Torpedo is vulgarly called, is often attended with a sudden sickness at the stomach, a general tremor, a kind of convulsion, and sometimes a total suspension of the faculties of the mind. Such power of self-defence has Providence allowed this animal!

Whenever his enemy approaches him, he emits from his body his benumbing charm, which sets the pursuer instantly at rest, and gives the Torpedo time to escape. But it is not a means of defence only, as through it the Torpedo benumbs his prey, and easily seizes upon it.

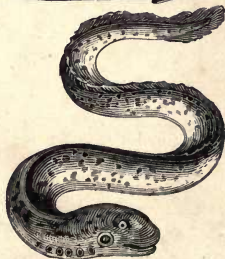
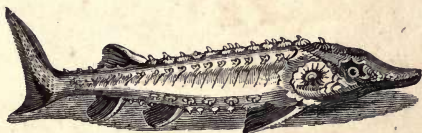
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## THE STURGEON.

The Common Sturgeon inhabits the seas near the mouths of large rivers, which it ascends to spawn. It grows to the size of eighteen or twenty feet, and is of a slender form. Its back is armed with a row of large tubercles, and smaller ones are found on every part of the body. Its general colour is ashy above, and whitish or yellowish below. The Sturgeon is much admired for its firm, delicate, and white flesh, which is said to resemble veal when roasted. Of its roe, dried and salted, is formed caviare; but a better kind is procured from a smaller



*Torpedo.*



*Sturgeon and Lamprey.*



species. The Sturgeon differs from the other fishes of the order in being oviparous: it is very prolific.

The Sturgeon which produces the isinglass is larger than the common Sturgeon: its sound is used in this preparation

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## THE LAMPREY.

This animal bears a strong resemblance to the eel, but is of a lighter colour, and a clumsier shape. The mouth likewise is round, and placed rather obliquely below the end of the nose. It has an aperture at the top of the head, through which it spouts water like the cetaceous fishes. On each side are seven apertures for respiration; and the fins are rather formed by a prolongation of the skin, than by any peculiar bones and spires.

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## THE COMMON WOLF-FISH

Frequents the Northern seas, and is sometimes seen on the coasts of Britain, where it has been found four feet long; on the more northern coasts it attains the length of seven feet. The head is flattened on the top, with a blunt nose and small nostrils; the eyes are near the end of the nose; the teeth and jaws are admirably adapted for the consumption of the animals on which the fish feeds, such as crabs, lobsters, prawns, muscles, scallops, &c. These, it grinds to pieces, and swallows, together with the shells. The body is long, and a little flattened at the sides; the skin, which is smooth and slippery, is of a dark brown colour, crossed with still darker bands. The dorsal-fin rises just behind the head, and reaches to the tail; as does likewise the anal-fin, which begins at a short distance from the head, underneath: the tail is small and rounded. The ferocity of this animal makes it a terrible enemy to the smaller fishes; yet it falls a victim to one inferior to itself in size and strength, the Lump Fish, which fastens on its neck, and remains there till it torments the Wolf-fish to death. This animal frequents the deep parts of the

sea; the eggs are about the size of peas, and the young are of a greenish cast. It is caught more by the net than the line. The flesh is not bad, but looks so ill, that most Europeans will not eat it. It is used by the Greenlanders, both fresh and dried, and its skin furnishes them with convenient bags.

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## THE COMMON SWORD-FISH

Frequents the Mediterranean, and is mostly found in the Sicilian seas; it grows to a length of twenty feet, and is fierce and active, preying on the smaller fishes, which it pierces with its snout. The body is long, round, and tapering towards the tail: the head is flattish: the mouth wide, both jaws ending in a point; the upper, stretched to a considerable length, is of a bony substance, covered with a thin skin; thick in the middle, and sharp at each edge. The fins are curiously shaped, in different parts like a sharp crescent; of which form is also the tail. The colour is of a steel blue above, and silvery white below. The Sword-fish is taken in the following manner: the fisherman mounts a cliff overhanging the sea, and having observed the fish, gives notice of its course. Another person, in a boat beneath, climbs the mast, to obtain a view of the fish, and to direct the rowers below. When he thinks the boat near enough, he descends, and plunges his spear into the fish, which, when wearied with struggling, is drawn into the boat. Its flesh, which is much esteemed by the Sicilians, is cut into pieces, and salted. The Sword-fish is not confined to the Mediterranean, but is found in the Northern seas, and sometimes in the Pacific.

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## THE DRAGON WEEVER

Is of a lengthened form, flattened at the sides, and covered with small scales, which are easily removed. The mouth is large, and opens downwards; both jaws are armed with strong teeth. The first dorsal-fin is small, consisting of five spines: the second is continued almost to the tail; so



is the vent-fin: the pectoral fins are of a moderate size; the ventral very small. The colour is silvery, with a yellowish cast on the upper parts. Its usual length is about ten or twelve inches. The Dragon Weever inhabits the Mediterranean and Northern seas, commonly frequenting the coasts, and often lying in the sand. If trodden upon, it strikes backward with great violence, aiming to wound with the spines of the first dorsal-fin. The pricks of this part are so troublesome, that it is a law in France that the fisherman shall cut it off before the fish is offered for sale. Violent heat, pain, and inflammation, are the attendant symptoms. The English fishermen rub the affected part with sea-sand; many other cures are common among the people. The Weever is much esteemed as an article of food in France, Holland, &c. It feeds principally on marine insects, worms, and small fishes; it is killed with difficulty, and lives many hours out of water; the skin is remarkably tough.

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## REMORA

This genus is remarkable for its power of attaching itself very strongly to a ship, rock, large fish, or other object. There are three known species, which do not differ materially. The Mediterranean Remora, or Sucking Fish, is about eighteen inches long, of a slender make, and uniform brown colour. Its shield is formed of transverse bars, strengthened by one across, all fringed with hairlike teeth, by means of which the creature adheres with astonishing strength. It is supposed to use this faculty for supporting itself in the water, as it is not able to swim well of its own strength. Great numbers frequently adhere to the bottom of a ship, and greedily devour all that is thrown from it. It was formerly said that this fish, by sticking to the bottom of a ship, stopped its course. This was of course a fable.

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## PLAICE.

The Plaice is broad and flat; of a pale brown, with large orange spots above, and white beneath. It inhabits the Mediterranean, Northern, and Baltic seas, and is plentiful on the British coast. Some weigh fifteen pounds; but those of eight or nine pounds are considered large. It is a fish much esteemed for food.

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## THE FLOUNDER

Resembles the plaice in shape, but its colours are marbled-brown above, and dull white beneath. It is found in the Northern, Baltic, and Mediterranean seas, and is very common on our coast, and even in the river near the sea. It is esteemed as food; but not so much so as many of the genus.

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## THE ROSTRATED CHÆTODON

Is remarkable for its uncommon manner of preying. It feeds on the smaller flying insects, watching them as they hover over the water, and shooting at them a drop of water from its long and hollow snout. They aim so sure as generally to bring the insect dead or stunned to the surface. The fish shoots from a distance of several feet. It is a native of the fresh waters of India, and affords great amusement when kept in a large basin. Its shape is round; its length is six or eight inches; and its colour whitish, with a dusky back, marked with five bands of deep brown with milk white edges.

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## THE TURBOT

Is considered as the best sh for the table. It is of a broad and square form, of a dark-brown colour above, marbled with blackish spots, and white beneath. It grows to a considerable size, and is taken abundantly on the coasts of Britain, France, Holland, &c. The baits used are pieces of herring, haddock, and small fish. All the flat fish frequent the bottom of the ocean, feeding on the lesser marine animals, and swim but badly.

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*White Shark.*



*Long-tailed Shark.*



## THE SHARK. .

Sharks are the fiercest and most voracious of all the inhabitants of the deep. Even the smallest species are dreaded by much larger fish, and with just reason. Indeed no fish is half so ferocious in its disposition, or can swim with a velocity, comparable to the shark. It outstrips the swiftest ships, plays round them, darts out before them, returns, and seems to gaze at the mariners without manifesting the smallest symptoms of dismay. Such amazing powers, joined with such ravenous appetites, would speedily depopulate the ocean, did not the upper jaw of the shark project far beyond the lower, so that it is obliged to turn on one side before it can seize its prey. As this act requires some time, the animal pursued profits by the delay, and frequently makes its escape. Still, however, the depredations which it commits are frequent and formidable : it is the terror of sailors in climates where it abounds, and bathing in the sea, so delicious and salutary in hot countries, is, on this very account, attended with extreme danger.

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## THE CUTTLE-FISH

Has an oblong fleshy body, almost inclosed in a kind of sheath; the head is furnished with two large eyes, and a horny beak with two mandibles, somewhat resembling that of the parrot. From the base of the head arise eight arms in a radiating direction, and frequently two, much longer than the rest. The inner surface of these legs is furnished with cup-like suckers, which enable the animal to adhere with great force to any substance to which it may attach itself. These curious animals are likewise furnished with an internal pouch, filled with a very dark fluid, (in some species intensely black,) which they can eject at pleasure through a tubular opening beneath the breast.

The common Cuttle-fish of the European seas, grows to the length of two feet, and is of a pale bluish-brown

colour, marked with numerous dark purple specks. In the fleshy part of the back of this species is found an oblong calcareous bone, of a cellular texture, and very regular construction. This bone is found very abundantly on the sea-shore, and constitutes an article of commerce. It forms a harmless dentif ce, and is made into pounce.

The anatomy of the Cuttle-fish is highly curious; it possesses a large pair of lungs, resembling those of quadrupeds in their situation, but allied to the gills of fishes in their construction. They have besides three hearts, situated in a triangular position, the lower one being larger than the others.

The eyes are very large, and are covered by the common skin, which is there transparent; the eye has a phosphoric and fiery appearance. Its ball is very hard and of a pearly appearance, and in some places is worn, as an imitation of pearl. The Cuttle-fish, like the others of its tribe, is of very predacious habits, feeding on fishes and other marine animals; its suckers enabling it to secure its food with great success. It is probable that it employs its dark liquor for this purpose, as well as that of defence, by involving its victim in darkness, and thus preventing its escape. The liquor of the common Cuttle-fish is very black, and if collected and dried, will split into fragments, which, if ground down and re-dissolved, will form an excellent ink of very durable blackness. It is supposed that the Indian ink of the Chinese is formed in this manner. In some species the liquor inclines to a reddish brown colour. The female Cuttle-fish deposits her eggs in clusters upon some sea-plant, rock, &c. The eggs, of the size of filberts, and of a black colour, are popularly called sea-grapes; the young animal proceeds from the egg completely formed, resembling the parent in all but size.

The CALAMRAY, LOLIGO, PEN-FISH, or INK-FISH, differs from the preceding species, in having a more lengthened form, darker colour, and the additional arms much longer. It is an inhabitant of the European seas, but less frequent than the former. It has the same habit of discharging a black fluid, and possesses, in place of the calcareous bone of the Cuttle-fish, a long transparent cartilage of a pen-like form. It is a very prolific animal; its eggs are curiously disposed in bunches, arranged like the spokes of a wheel; and are so transparent as to exhibit the young animal several days before its exclusion. These eggs are found floating on the surface of the water, and have been mistaken for a species of Medusa. The most surprising of all

this genus, is the *Sepia Octopodia*, the Eight-armed Cuttle-fish. The body is of a short oval form, and the eight arms are equal, and about three feet in length.

These Cuttle-fish are generally found in pairs, in some deep pool of the ocean. The female is very stationary, but the male often issues forth in search of prey. When full grown, it possesses great fierceness and strength, and will contend for victory with a powerful mastiff. It has been known to attack a person swimming, and to adhere to him with dangerous force; it is supposed to possess an electrical power in its suckers, from the painful and prolonged sensation they occasion. The eggs of this species are very numerous, and disposed in a grape-like form; they are transparent like those of the calamary.

Many marvellous stories are related of this animal, from which it would appear certain that there is, in the Indian seas, some gigantic species of cuttle-fish, capable of doing much mischief. Among these accounts we may probably place the fabulous stories of the Northern Kraken.

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### THE MEDUSA PULMO,

Is a large species, found in many of the European seas, and especially on the Italian and Sicilian shores. Its diameter measures two feet; the form of its body is hemispherical, concave beneath, slightly scalloped at the edge, and furnished beneath with a very curious apparatus, consisting of a main trunk, separating into eight central lobes, which end in as many subtriangular processes. The whole is of glossy transparency, and much resembles a lustre, or chandelier.

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### THE MEDUSA CAMPANELLA

Is less than an inch in diameter, and very concave; it is furnished beneath with a hollow tube, and four processes rounded at their extremities; round the edge of the body are numerous tapering tentacula. In the British coasts we find commonly a very elegant Medusa, with a circular body



having round the centre four lilac tubes, formed into a sub-triangular shape.

All the Medusæ are predacious, and, notwithstanding their apparent tenderness, have considerable strength in their tentaculæ, using them to seize their prey, which they afterwards absorb through the central tube.

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### THE SKATE ●

Attains a weight of two hundred pounds or more. It is pale dusky brown above, with darker marks; and below white, speckled with black. It is much eaten by the Europeans.

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### THE THORNBACK

Is not so large as the Skate, and is covered with numerous strong and curved spines. It is not so much esteemed for food as the Skate.

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### THE STING RAY

Is not so large; it is found in the Mediterranean, Atlantic, and Indian seas, and is used as a food. Its colour above is olive or blueish brown; beneath, white. Its tail is not finned, but lengthened out, tapering to a point, and having, about the middle, a sharp and strong spine, edged on both sides like a saw, and capable of inflicting wounds; which, under unfavourable circumstances, may prove mortal. It was formerly falsely thought to be poisonous.

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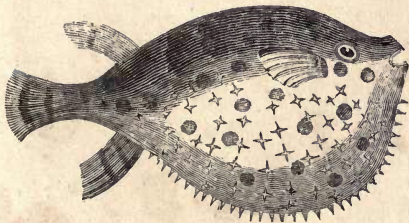
### THE DIADON

Measures about two feet in length, and is of a round form. The colour is a pale grey, with black spots. It is an inhabitant of the Indian and American seas; and though very coarse, is sometimes eaten by the West Indian islanders.

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*Thornback.*



*Globe Diadon.*



## THE STICKLEBACK.

The Three-spined Stickleback is seldom more than two inches in length, and is very common in many of our rivers. It has on its back three sharp spines, which serve as instruments of offence and defence being always erected on the appearance of danger, or when this sh attacks another. The usual colour is an olive-green above, and white below; but, in some, the under parts are of a bright crimson. These little shes are very destructive, as they consume a great quantity of the fry of other sh. They are very fierce, attacking and destroying fishes many times their own size.

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## THE COMMON EEL

Is found in almost every part of the Old Continent; not only in rivers and stagnant waters, but sometimes in salt marshes and lakes, and even, in the spring of the year, in the Baltic and other seas. As a species, it is distinguished by its long and prominent under-jaw; and by its uniform colours, which are olive brown on the back, and silvery on the sides and beneath; the ns have a slight tinge of violet, and sometimes a margin of pale red. The Eel is sometimes seen of a very dark colour, without the silvery tinge, and sometimes yellowish or greenish; those are most beautiful which inhabit the clearest waters. The head of the eel is small, and furnished with several ranges of small sharp teeth; on each side of either jaw, are found several very small pores, whence oozes a clammy fluid, to which, probably, is owing the slipperiness of skin for which the Eel is notorious. The scales are very small, and set so deeply into the skin, as scarcely to be visible in the living animal; they are, however, very conspicuous in the dried skin; their form is oval, their colour white, and their texture of a fine net-work. The Eel is very tenacious of life and may be kept a long time out of water, if placed in a cool situation; it is even said to leave the water at certain periods, to wander about meadows and moist places in quest of snails, &c. It is said to be fond of new sown peas, and to have been seen to root them up, and devour

them during the night. The Eel usually feeds on water-insects, worms, and the spawn of fishes; it will devour almost any decayed animal substance which may be thrown into the water; it is viviparous, bringing forth its young at the end of the summer. The Eel usually spends the day in a hole in the banks, which is furnished with two openings, to provide for its easy escape; in winter it lies hidden under the mud. It is taken in great numbers in many parts of Europe; about the shores of the Baltic, and in the river Garonne, they have been observed to be very numerous. Most medical writers condemn the Eel as food; but it is probably hurtful only in excess, being highly nutritious. The usual length of the animal is from two to three feet; it is said to attain to the size of six feet, but very rarely. It is of slow growth, and lives to a great age.

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### THE COMMON PIKE

Inhabits the smaller rivers and lakes of Europe, and is noted for its great voracity; it will devour any thing, and has been known to be choked in trying to swallow a fish of its own species as large as itself: it is the terror of the smaller fish, who avoid it as the lesser birds do the hawk. In the rivers of Lapland the Pike has been found eight feet in length; but in this country it is much smaller. The head is very flat, the mouth is furnished with teeth to the amount of seven hundred; the body is of a lengthened form, not tapering very much towards the tail; the colors are pale olive-grey, deepest on the back, and marked on the sides with yellowish patches; the abdomen is white; slightly spotted with yellow. The animal lives to be very old.

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### THE COMMON HERRING

Furnishes man with an abundant article of food. It appears in the month of June, coming southwards towards the Shetland Isles in a shoal five or six miles in length, and three or four in breadth. The water is driven into a ripple before them; and when they rise to the surface,

they look like a eld of the most brilliant gems. They divide into two branches, as they pass the Shetland Isles ; one coming down the German Sea, the other advancing towards Ireland, which again divides itself ; their course is is not to be traced much farther. It is now supposed that they do not common from a great distance, but rise from the bottom of the sea, where they have lain during the winter. The herring-fishery is very valuable. Numbers of the fish are eaten fresh, and more still pickled or salted ; forming, in this state, an important article of commerce. The Herring is from ten to thirteen inches in length, of a silvery hue ; greenish on its back. The Herrings yield a great deal of useful oil.

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### THE PILCHARD,

Which abounds on the coast of Cornwall, very nearly resembles the Herring ; but its length rarely exceeds eight inches.

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### THE SHAD

Is much larger than the Pilchard. It is found in the Mediterranean and Northern seas ; and ascends the rivers to spawn, in the manner of the Salmon.

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### THE SPRAT

Is so much like the Herring that it was formerly thought to be its young ; but there is a real difference besides that of size. The Sprat visits the Mediterranean and Northern seas, in immense shoals, and is eaten pickled and salted as well as fresh.

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### THE ANCHOVY

Is found in the Mediterranean, Northern, and Atlantic seas, but disappears at spawning time. The principal fishery of Anchovies is on a small island near Leghorn.

They are salted and pickled for commerce ; and are much used for sauce, the bones having been dissolved by boiling. It is usually about four inches in length ; of a dusky-green colour, somewhat transparent.

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### THE EATABLE OYSTER

Is a pretty universal inhabitant of the globe, and is well known as an agreeable and wholesome food. The Oysters cast their spawn on the rocks or stones around them, and each egg adheres to the spot where it falls : at first it resembles a drop of candle-grease of a greenish hue. The Oyster has a set of muscles, admirable in their contrivance, by which it opens and closes its shell at pleasure. It breathes by means of gills. Oysters are procured by means of nets furnished with an iron scraper. They are suffered to lie in pits for some time before they are taken to market. The coasts of Britain abound with excellent Oysters of various species. The most esteemed are those from the neighbourhood of Colchester, in Essex. Many severe laws exist for preserving the oyster-beds in their full perfection.

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### THE SCALLOP

Resembles the Oyster in the form of its hinge, but the inhabiting animal differs materially. It has the power of progressive motion both by land and water. If left on the shore by the tide, it opens its shell widely, and shutting it again with a sudden jirk, it throws itself forward, and so on till it reaches the sea. When the sea is calm, the Scallops assemble in troops, and raising the upper valve of their shells, they float along the surface ; on the approach of danger they close their shells and sink to the bottom.

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### THE MUSCLE

Is very important as containing the Pearl-muscle, the chief producer of the mother-of-pearl, and pearls. The



shell grows to a considerable size, and is of a circular and flattened shape, with a straight hinge. The substance of the shell, when cut and polished, forms the mother-of-pearl of commerce; and by the petrification of the cartilaginous hinge behind, is formed the very rare and beautiful fossil androdamas. The pearls are found attached either to the shell, or the body of the animal: and are supposed to be extraneous exudations from the latter. A hundred or more are sometimes found in one large shell; their value depends upon their size, colour, form, and lustre. They are generally white, but vary to blackish, yellowish, and reddish; they are rarely found of any considerable size. The pearl fishery is performed by divers, and is dangerous, difficult and unwholesome. The most considerable pearl fisheries are those of Ceylon and the Persian Gulf. Pearls are formed by many or most of the Testacea.

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### THE EATABLE MUSCLE

Is one of the most abundant and general of shells, furnishing an abundant, nutritious, and agreeable food. Very pernicious effects have sometimes ensued from the eating of Muscles, but this is attributed to the incautious swallowing of a minute crab, which often introduces itself into the shell of the Muscle. This shell is of a pleasing form, and exhibits, upon the removal of the epidermis, a splendidly disposed purple colour. It has, in common with all its tribe, the power of locomotion, by means of a tongue or foot, capable of elongation and retraction, which is marked with a longitudinal furrow, and enveloped in a sheath of purplish fibres. When the Muscle wishes to attach itself to any particular spot, it employs this bre in weaving silky threads by which it fastens itself to the rock.

The Muscles are distinguished by having a hinge with no tooth, but a hollow longitudinal line, and the silky beard by which the animals attach themselves to any substance.

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### THE DRAGONET.

THE common dragonet, for there are three species, is sometimes found a foot long. The body is slender, round,

and smooth; the head large, and depressed at the top; and in the hind part are two orifices through which it breathes, and ejects the water received by its mouth, after the manner of cetaceous fishes. The aperture of the gills are closed; and on the extremity of each of the bones which covers them, is a very singular trifurcated spine. The upper jaw projects much farther than the lower, and the teeth are very minute, though the mouth is extremely large.

The colours of this fish exhibit a delightful variety of yellow, blue, and white; the blue, in particular, is inconceivably beautiful, and glows with a lustre little inferior to that of the diamond. Pontoppidan calls this species the flying fish; but, whether it makes use of its fins as the means of elevating itself out of the water, is a circumstance which has not yet been satisfactorily ascertained.

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## THE COMMON SEA-URCHIN

Is very frequent on many of our own coasts. It is slightly flattened beneath, and often measures four inches in diameter. The body within the shell is divided into lobes, something like an orange; the intestines are disposed in a circular direction, and the whole body is supported by bony columns. The shell is of a dull violet, or greenish colour, and is beset with a multitude of sharp spines, moveable, and jointed into the tubercles of the surface, to which they are also attached by strong ligaments. These spines are the organs of motion, by means of which the animal changes its place at pleasure; while it fastens itself to any particular object, by feelers issuing from numerous small holes between the tubercles; these feelers are also employed in conveying the food to the mouth of the animal. The Sea-Urchin is extremely tenacious of the vital principle. Many of the Sea-Urchins, especially those of the Indian seas, are highly curious; and, in all, the shell, divested of its spines, presents a beautiful appearance, from the lacy structure of the hole, and the pearly colour of the tubercles.

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## THE SOLEN

Has an oblong shell, resembling in its shape a razor, thence called the Razor-shell: the hinge has a small, sharp, reflected tooth, sometimes double, not inserted into the opposite valve. The Solen has not the power of progressive motion on the surface; but it can dig a hole or cell in the sand, to the depth of two feet, which it can ascend or descend at pleasure. The organ by which it effects these movements is called the tongue, and is common to many of the bivalves. In this genus it is placed at the centre, and is fleshy, cylindrical, and rather long: the animal is able to direct the form of its tip, so as to apply it to what purpose it chooses. When it wishes to descend, it shapes its tongue as a shovel, and cuts a hole in the sand; and then it advances its tongue into the sand in the form of a hook, and resting upon it as a fulcrum, forces its shell downwards. When it chooses to regain the surface, it makes its tongue assume the shape of a ball, and, by an effort to extend its whole tongue, forces its shell upwards. These movements are effected with a rapidity quite unexpected.

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## THE ACTINIA VARIA

Is very common on most of the European coasts; its colour varies much, being either red, olive, or green; plain or varied; its chief character is the possessing a row of short, bead-like processes of a bright blue colour; surrounding the outward circle of tentacula. It generally measures about two inches in diameter; but will grow to a much larger size.

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## THE ACTINIA CRASSICORNIS

Is distinguished by its red colour, and roughish external surface, and the contrasted beauty of its expanded part, which is purely white, marked near the base of the tentacula with numerous carmine streaks; the tentacula are pearl coloured. The diameter of this species often measures four, five, or six inches.

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## THE HOLOTHURIA PHYSALIS,

Called by the sailors the Portuguese Man of War, resembles an oblong transparent bladder, several inches long, and sharp at one end; its colour is a pale purple, with deeper veins; along the back runs an elevated ridge, and from beneath the thick end of the body hang numerous deep hostile feelers, of various lengths, while the under edges of the body are surrounded with short processes of a deep purplish-brown colour.

The anatomy of these animals is imperfectly known, but, if handled, they inflame the hand considerably.

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## THE SEA ANEMONIES

Are very voracious, and absorb even shelly animals; those parts which they cannot digest, they reject through the same orifice. They are viviparous; several young are produced at a time, of a small size, and varying in proportion to the size of the parent. The Actiniæ, like the Polypi, can re-produce the organs of which they have been deprived.

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## THE STAR FISH

Is remarkable; its character consists in having a flattened body covered with a tough skin, roughened by a multitude of small, and rather hard processes. It is generally of a radiated form, consisting of several limbs, placed round a centre, beneath which is the mouth. In different species the rays vary in number from five to twelve; they are mostly broad at the base, and tapering towards the end; but some are quite narrow, and others branched. The most curious species are foreign; many of the simple abound in the European seas.

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*Land Tortoise.*



*Sea Devil.*

## THE LAND TORTOISE.

It is from one to five feet in length, from the tip of the snout to the extremity of the tail, and from five to eighteen inches across the back. The head is small, somewhat like that of the serpent kind, and may be protended or concealed under the shell at pleasure; the eye has no upper lid; the tail is long and scaly, like that of a lizard; and the exterior covering is composed of several pieces of shell, united in the firmest and most compact manner.

Though this animal is of the most pacific disposition, it is admirably formed for defence, and seems to be almost endowed with immortality. Scarcely any violence can deprive it of life: it will retain the vital principle after it is deprived of the brain, and even of the head. It is remarkable for its longevity; and, though it is difficult to ascertain its precise duration, there is an instance recorded of one kept in the garden of Lambeth Palace, which was known to have lived above one hundred and twenty years.

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The animals of this genus have their bodies defended with a shell which consists of two plates, one above, the other below, joined together at their edges. The upper one is convex, and is generally formed of thirteen plates regularly arranged, and surrounded by a margin of twenty-four. There is a hole for the passage of the head and fore feet at one end of this compact piece of armour, and another at the other end for the tail and hind legs. The animal cannot disengage itself from this covering, its very bones being united to it; it forms, however, a sufficient defence against every enemy but man. The head is small, and the want of teeth is supplied by hard bony ridges. The upper jaw closes over the lower like the lid of a box, and with such strength, that it is hardly possible to force them open. The legs are short, but astonishingly strong; one of the larger species has been known to carry on its back, without apparent difficulty, as many as five men. Though of a clumsy appearance, these animals are very gentle; few, except the loggerhead and fierce turtles, make any resistance when taken. They are so tenacious



of life, that they will retain it several days after having their heads cut off, and chest lain open. They pass the cold season in a torpid state. The marine tortoise or turtles, are distinguished by their fin-like feet. There are in all about thirty-six species; four marine, eighteen living in fresh water, and the rest on land. The species are distinguished by the colours and pattern of the shell.

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### THE COMMON, OR GREEK TORTOISE

Is found in all the countries bordering on the Mediterranean, as well as the Islands of that sea; it is said to be most abundant in Greece. It will live in cold climates, and has often been imported into England. Its length is from six to eight inches, and it weighs about forty-eight ounces. The middle part of the shell is of a brown colour, varied with yellow, with a dark stripe down each side; the head and legs are covered with scales. This creature lives to a very great age: in winter it burrows in the ground. Its motions in digging are still slower than in walking, so that the animal, although he works without intermission, does not complete his hole in less than a fortnight. Its food is chiefly of milky plants, such as lettuce, &c. It is very averse to rain, taking shelter on the slightest shower, and never going out on wet days. It dislikes excessive heat, and passes the hours of bright and hot sunshine, under some broad leaf. It becomes attached to those who take care of it. It lays its eggs about June, in a small hole, which it forms in a sunny spot: the young are hatched in September, and are of the size of a walnut. The eggs are much esteemed by the Greeks, who eat them boiled; they also drink the fresh blood of the animal without any preparation. Though of so quiet a disposition, the male tortoises will fight with each other, butting with their heads.

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### THE MUD TORTOISE

Is found plentifully in many parts of Europe, as well as Asia. It is about seven or eight inches long, and three or four inches broad. The colour of its shell is blackish, as is also that of the skin; the feet are webbed. The animal

utters sometimes a broken hiss, like other tortoises. They were found in such abundance in a lake in the south of France, as to supply the peasantry with food for three months together. Though aquatic, the mud tortoise lays its eggs on land, digging a hole to receive them, which it covers with mould. The pace of this animal is much more rapid than that of the land tortoise. It may be domesticated, and is a useful inmate of a garden, as it feeds on snails and other noxious insects. It must be provided with water, but if placed near a fish pond, would prove very destructive to the sh.

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### THE SNAKE TORTOISE

Inhabits the stagnant waters of North America, and weighs, when full grown, fifteen or twenty pounds. The general colour of the animal is a chesnut brown: the shell is oval and depressed: the head flat, triangular, and covered with scaly warts; the neck, which appears very short when the animal is at rest, may be stretched out to a third of the length of the shell. This is shown when the animal seizes its prey, which it does with great force, accompanied with a hissing noise. The grasp of its jaws is so strong, that when it has taken hold of a stick, it will suffer itself to be raised with it rather than let it go. The feet are webbed.

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### SEA-DEVIL.

The head of this disgusting animal is equal in size to all the rest of the body. It is sometimes seen four or five feet long; and Mr. Pennant mentions one taken near Scarborough, whose mouth was a yard wide. To increase the deformity, the under jaw is much longer than the upper; and immediately above the nose are two long tough filaments, and on the back three others, which seem like lines hung out to attract fishes. The body grows slender towards the tail. The colour of the upper part of the body is dusky, the lower is white, and the skin is smooth.

The fishermen entertain a sort of veneration for this ugly fish, as conceiving it to be hostile to the dog-fish, from the body of that fierce and voracious creature being frequently found in its stomach: on this account, when they catch the fishing-frog, they generally restore it to its native element.

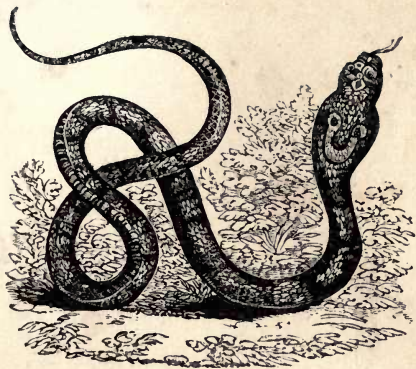
## SERPENTS.

These animals are distinguished from the other amphibia, by their want of feet; their motions being made by means of their scales and general writhings. The poisonous serpents may be distinguished by the structure of their teeth. The poisonous fangs, or teeth, are mostly larger than the others, and of a tubular construction; they are so situated, that the animal can raise or lower them at its pleasure. The fangs are always placed near the edge, at the front of the upper jaw, and have communication with a peculiar reservoir which contains the poisonous fluid. They in general lie with their points bent inwards, but are quite erect when the animal is provoked. It may be considered as a rule, that the poisonous serpents have only two rows of proper teeth in the upper jaw, while the other species have four. Most of the poisonous species have heads covered with small scales; and their scales in general have a raised ridge passing through their centre. All serpents cast their skins at certain periods; in temperate climates annually; oftener, perhaps in the warmer regions. In temperate and cold climates they conceal themselves under ground, to pass the winter in a state of greater or less torpidity. Some serpents are viviparous, especially the poisonous species: but by far the greater number are oviparous, and deposit their eggs in a kind of chain, in some warm and close place, where they are hatched.

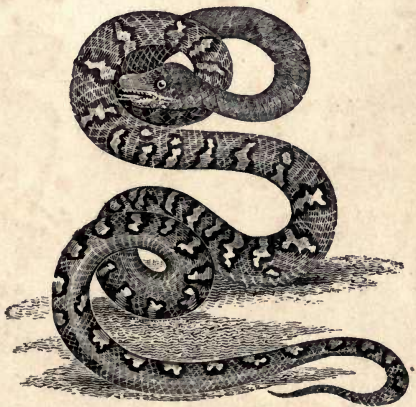
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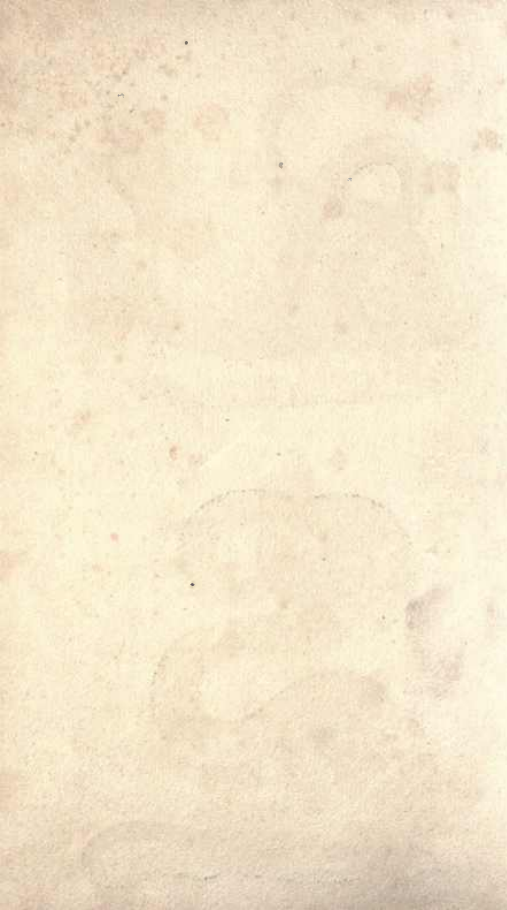
THE SNAKE.

This is the largest of British serpents, sometimes exceeding four feet in length. The neck is slender; the body swells in the middle; the back and sides are covered with small scales; and the belly with oblong, narrow, transverse plates. The colour of the back and sides is dusky brown; along the middle of the back run two rows of small black spots, reaching from head to tail; and from them proceed numerous lines of spots, crossing the sides. The plates on the belly are dusky; those on the sides are of a bluish-white colour. On each side of the neck is a



*Snake.*





spot of pale yellow at the base of which is a triangular black spot.

This reptile is perfectly innoxious. It feeds on frogs, insects, worms, and mice, and lodges among bushes in moist situations. It deposits its eggs in dunghills, the heat of which, aided by that of the sun, promotes the exclusion of the young. During winter the snake, like the rest of its kind, continues torpid in the banks of hedges, and under trees.

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### THE HOODED SNAKE

Is a native of India, of whose reptiles it is the most common and noxious: its bite very frequently proving fatal, and that in the course of a few minutes. Its form and colours are so remarkable as to distinguish it very readily. It is about three or four feet long, with a rather small head covered on the front with large scales like those of most innoxious serpents. The upper parts in general are covered with scales shaped like grains of rice. A little way below the head, the skin spreads at the sides for about four inches, and then gradually diminishes to the general bulk of the body. This part can be swelled at the pleasure of the animal, and has given it the name of hooded. The usual colour is a pale ferruginous brown above, and below a bluish white, sometimes tinged with pale brown or yellow. In India this reptile is very well known, being every where exhibited for show. It is carried about in covered baskets and made to assume a dancing motion, raising itself on its lower parts, and moving its head from side to side to the sound of music. Those who thus show the animal, first deprive it of its fangs.

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### THE CRIMSON-SIDED SNAKE

Is a poisonous but very beautiful species from New Holland. It is about the size of a common snake, its head and upper parts are of a fine violet colour; its sides are covered with large scales of crimson edged with black; the abdominal plates are rose-coloured and edged likewise with black: the tail is a bluish ash.

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## THE RINGED SNAKE

Is common in all parts of Europe, frequenting woods, moist hedges, and shady places. Its colour varies very much, but is generally a pale olive or bluish grey on the upper parts, marked along the sides by a row of transverse black streaks, terminating in spots of the same colour; there is a kind of collar round the neck formed of crescent shaped patches of black and pale yellow: the under parts are mixed of black and a whitish colour. The head is rather small and covered with large scaly plates: the scales of the upper parts are a little carinated: the tail is moderately long, tapering towards the end. This snake is quite harmless, and may be made tolerably tame. It preys chiefly on frogs, mice, small birds, insects, &c. It sometimes frequents the water for the sake of the frogs, &c.; it swims, but not swiftly. It deposits its eggs in a warm and moist situation, in the form of a continued chain; their number is from fourteen to twenty, they are about the size of a blackbird and of a whitish colour. The snake becomes torpid during the winter, and casts its skin at its time of awakening in the spring.

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## THE WATER SNAKE

Is so called from its habitual residence in the water; it very much resembles the slow-worm in external appearance, and is principally distinguished by its flattened tail.

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## THE GREAT HYDRUS

Is more than three feet in length, of a pale livid colour, with large dusky bands across the back. Its head is of a middling size; the body increases gradually, and then decreases more abruptly towards the tail, where it is the smallest; the tail spreads into a long oval, and is covered with scales like those of a fish. It is an inhabitant of the salt water, and its history is little known; some of the teeth are tubular, like those of the poisonous serpents. This animal is a native of the Indian Seas. There are about twelve species of the hydrus genus.

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## THE BOA CONSTRICTOR.

The boa frequents caves and thick forests, where it conceals itself, sometimes rolled round the body of a tree, till its prey comes within reach. When it seizes animals, especially of the larger kind, it presently twists itself round them, so as effectually to involve their body and impede their motions, while by the vast force of its circular muscles, it breaks and bruises all their bones. After having destroyed life, it licks the skin all over to facilitate swallowing: this process reduces its victim to a shapeless shining mass; when, beginning at the lower extremity, it gradually sucks in the body. The boa has been observed for a long time with the horns of a stag sticking out at its mouth; being too complicated to swallow, as well as too hard to digest.

For some days after it has swallowed a stag, or a tiger, it is fixed to the spot, being unable to move from repletion; and then the natives easily kill it. When exasperated, it makes a loud hissing noise.

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## THE ACROCHORDUS.

There are three species in this genus, differing very little. The first was discovered in the island of Java, in a pepper ground. It measured eight feet in length; the neck was about six inches thick; the largest part of the body ten inches, and the tail only an inch and a half. The colour of the upper parts was whitish, that of the lower blackish; the sides are marked with dusky spots; the head ends abruptly, and is flattish; there is no appearance of fangs in the mouth; the body tapers very suddenly towards the tail, and both are covered with warts. A quantity of indigested fruit was found in the stomach. The flesh was eaten by the Chinese who found it, and pronounced to be excellent.

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## THE COMMON SLOW-WORM

Is found in all parts of Europe, in similar situations with the common snake; it is quite harmless, and lives on worms and insects. Its length is about ten or twelve inches; its colour is a pale rufous brown above, three narrow streaks of a darker colour are continued down the back; its under parts are of a deep lead colour. The head is rather small, and covered in front with large plates; the tail measures more than half the whole length of the animal, and ends rather suddenly in a pointed tip. The slow-worm is viviparous, producing very many at a time. It passes the winter in a torpid state. It is remarkable for its brittleness, breaking off abruptly when struck hard. There are several species in different parts of the world.

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## THE ASTERIAS RETICULATA

Often measures a foot in diameter. It is of a yellowish red colour, and thickly tuberculated on the upper surface; furnished on the margin of the rays with curiously jointed processes, and every where marked with slightly elevated, triangular, reticulations. It is a native of the Indian seas.

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## THE ASTERIAS CAPUT MEDUSA,

Or Medusa's head star-fish, is the most curious of the tribe. It grows to a large size, measuring more than two feet in diameter; its body is divided into five equal jointed processes; these are each sub-divided into two, and so on, again and again, till the number amounts to thousands; the whole forms a natural net, in which the animal entangles its prey.

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## THE SIREN.

This animal was discovered by Dr. Garden in Carolina, and Linnæus considers it so extraordinary, that he estab-



*Siren.*



*Toad.*



lished a new order for its reception. The body is biped, naked, and furnished with a tail; and the feet have very long claws. It is found in swampy and muddy situations, under the trunks of old trees, and measures from thirty to forty inches in length.

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### THE COMMON TOAD

Is very universally known. It is found in gardens, woods, and fields, and often makes its way into cellars, and other retired places, where it can find food and shelter itself from the cold. It passes the breeding season in the water, where it deposits its spawn, which undergoes the same changes as that of the frogs. The toad is of a dark brown or olive colour, irregularly and obscurely spotted. Its skin is rough and granulated. The toad, in spite of its natural shyness, may be tamed and rendered very familiar. The toad may be said to be a harmless animal. The fluid that oozes from its skin does, indeed, affect very small animals, being slightly acrimonious, and this we may suppose has given rise to the fable of its being of a highly poisonous nature.

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### THE MEPHITIC TOAD

Is so called from its emitting, when handled, a most intolerable odour, resembling that of the vapour of arsenic. It is found in some parts of Germany, and is much like the common toad, excepting in having a pale sulphur-coloured stripe running down the back, and a grey abdomen.

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### THE PIPA

Is a toad found in Surinam, which presents to us a phenomenon unexampled in the history of animals. The pipa is considerably larger than the common toad, its body is flattish, its head somewhat triangular, its mouth very wide. The male is larger than the female, its body being seven

inches in length. The general colour of both sexes is a blackish brown. The female is furnished with a number of small cells all over her back. When she has deposited her spawn, it is taken by the male, who rubs it into the cells on her back, which immediately close over it. In these cells, the tadpole is hatched, and undergoes its usual changes, not coming forth till it has attained its perfect form. The number of young has been observed to amount to seventy-five in the back of one female.

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## THE FROG.

This genus admits of being divided into, 1st, Frogs which leap when disturbed; and 2d, slender limbed Frogs. They all feed on insects and worms, reside principally underground, or partly in water, in dark lonely places, and come out mostly at night. Some, however, reside in trees. None of them drink, but all absorb in moisture through the skin. They are oviparous, and their eggs are like jelly and adhere together, some in irregular heaps, some in a cylindrical worm-like figure. The animal, when first hatched, is called a tadpole; it is formed like a fish, and resides in the water. After some time the legs grow, and then the tail falls off. They attain their perfect size and form in about four years, and live at most ten or twelve.

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## THE COMMON FROG

Is found every where in moist places, or such as afford a sufficient supply of food, which consists of insects, worms, &c. Its prevailing colour is an olive brown, varied with blackish spots; beneath, it is of a pale greenish yellow very indistinctly marked. The form of the frog is light and elegant, and its movements are very lively. Its hind feet are strongly webbed, it is an excellent swimmer, and chiefly inhabits the water during the heats of summer and the colds of winter; this last season it passes in a state of torpidity. When first the animals have changed the state of tadpole for that of Frog, they issue out of the water in such numbers as to cover the banks, and have thus given rise to the opinion of their falling sometimes

from the clouds. The tadpoles feed on vegetable substances or animalcules, thus differing from its parent and future self, whose food is animal. The hind legs of the frog are very much longer than the fore.

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### THE GREEN FROG

Is a large species, which is eaten in some parts of the continent.

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### THE BULL FROG,

An inhabitant of many parts of North America, is not less than eighteen inches from the nose to the end of the hind feet. Its colour is a dusky olive, irregularly marked with numerous brown spots, the under parts are altogether paler, the hinder feet are very widely webbed. The bull frog frequents springs in Virginia; where these abound, they generally form a little basin before they flow into the plains, and each of these basins are inhabited by a pair of frogs who sit at the brink, and if disturbed, take refuge in the mouth of the spring. The people of Virginia fancy that they keep the springs clean, but they dislike them as being sad devourers of their young ducks and goslings, which they swallow whole. These frogs have a very loud voice, in tone like that of a bull, and make themselves very troublesome by their constantly exerting it; they are torpid during the winter; they are used as an article of food, and have on their bodies nearly as much meat as is found on a fowl.

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### THE TREE FROG

Is a very small species, which resides chiefly amongst the trees. The extremity of each toe is furnished with a soft fleshy knob, by which it adheres very strongly to the most polished surfaces. Its belly, likewise, is covered with glands possessing the same adhesive power. This little animal often hangs suspended to the branches by its legs,



or abdomen, thus concealing itself behind a leaf. Its colour is green, of various shades, the under parts of the limbs are reddish, and each side of the body has a blackish or violet-coloured streak, below which it is white. During the summer the animal inhabits the woods, but in autumn it descends to the waters, where it passes the winter imbedded in the soft mud. On its reviving in the spring, the female deposits her spawn, and the male exerts a very loud sharp croak, which may be heard at a great distance. These beautiful little animals may be domesticated and used as living barometers, being more noisy on the approach of rain, and quiet in fine weather. Their chief food consists of flies, at which they dart with great activity after creeping quietly up to them, as a cat does to a mouse. They are found in America, Italy, Germany, France, &c. but not in the British Isles.

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### THE COMMON VIPER

Is pretty well known in every part of the Old Continent: it is found in Great Britain, but is excluded, together with the others of the order, from Ireland. It varies much in colour, from a pale dun to a deep brown, but is always marked with a chain of rhomboidal blackish spots. The head is broad and somewhat flattened, bulging out at the sides toward the back; its colour is blackish, and on its upper part is a large divided and somewhat heart-shaped spot. The under surface of the body is dusky or blackish, with a gloss of blue, resembling polished steel. The general length of the viper is a foot and a half or two feet; some have been seen, measuring nearly three feet. The fangs, which are situated as usual in the fore part of the upper jaw, are two in number, accompanied sometimes with smaller ones. The viper has long been esteemed the most poisonous of the European serpents; many instances are related of its fatality; it does not appear, however, certain that it has ever produced so terrible an effect, though it is possible that it might occur, where the situation of the bite, and other circumstances, were favourable to the diffusion of the poison. The bite is usually attended with a painful and troublesome swelling, but is seldom productive of other ill consequences; it is more fatal to the lesser animals. The poison of the viper has been, and is still, used by savage nations for their poisoned arrows. The



*The Lizard.*



*The Crocodile.*



remedy most in repute for the bite of the viper is olive oil, thoroughly rubbed into the wounded part; sal volatile, &c. appears less efficacious. In many places the flesh of the viper is eaten, and esteemed highly restorative and healthful. The viper is viviparous, and produces its young at the close of the summer.

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## THE CERASTES OR HORNED VIPER

Is something more than a foot in length, and has a pair of curved horns on its heads just above the eyes: these horns do not appear to be of any service to the animal. It is an inhabitant of Africa and Asia, and particularly frequents Syria, Arabia, Egypt, &c. It is much like the common viper but more dangerous, since it is in the habit of springing from a great distance on those who approach it, without any previous provocation. This is supposed to be the same with the asp, with which the celebrated Cleopatra, Queen of Egypt, effected her own death. Some of the inhabitants of the countries in which the Cerastes is found, have the means of handling the animal with perfect safety; at least so we are told.

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## THE LIZARD.

THE length, including the tail, is about seven inches. A black list runs along the back, and a brown one on each side; the belly is yellow, and the scales, which are large and even, are varied with black and brown. The legs and feet are dusky, and on each foot are five toes, furnished with claws.

This animal is extremely nimble, and in hot weather may be seen basking on the sides of dry banks or old trees; but on finding itself observed, it quickly retreats to its hole. It feeds, as indeed do all the species found in England, on insects, and in its turn it becomes the prey of birds. All the British lizards are perfectly innoxious: it is their figure alone that excites our aversion, and has occasioned their representation in an unpleasant point of view. Indeed, few can divest themselves of a certain horror at the sight of even the smallest of them: with us they possess neither beauty of colouring or elegance of

form, to attract the eye; but in the former quality there are some species, natives of warmer climates, which might justly challenge our attention and admiration.

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## THE CROCODILE

Is a native of Asia and Africa, but is most common in the latter. It frequents large rivers, such as the Nile, Niger, &c. preying chiefly on fish, but occasionally seizing any animal that comes in its way. It is of great size, being often seen twenty feet in length, and is even recorded to have exceeded thirty feet. The scales of the crocodile form a compact and curious armour, so strong as to repel a musket ball, and giving the animal the appearance of being clad in a case of regular carved work. Its colour when full grown, is blackish-brown above, and yellowish-white beneath, the upper parts of the legs and sides are sometimes varied with deep yellow, and sometimes tinged with green. The eyes are provided with a nictitating membrane like that of birds, being a transparent and moveable skin. The mouth is very wide, and the jaws are furnished with sharp pointed teeth, to the number of thirty or more in each jaw. The legs are short, but strong and muscular. The hinder feet are webbed, and all the feet are furnished with curved claws, strong and sharp. The tail is very long, flattened at the sides, and furnished with upright process with a saw-like edge, formed by the union of two crests that proceed from the middle of the back. The crocodile when young, is so small and weak as to be quite harmless, but when arrived at its maturity, it is the object of great terror; it lies in wait on the banks of rivers, whence it snatches away dogs and other animals, swallowing them instantly and plunging into the water, to await in some retired place till hunger again summons it to the attack. The crocodiles deposit their eggs in the sand or mud on or near the banks of rivers; the young when hatched, immediately proceed to the water, but few escape the depredations of the ichneumnus bird and other animals who prey upon them. The eggs of the crocodile of the Nile are not larger than those of a goose, and the animal when first hatched, has a very large head. The eggs are guarded by a calcareous shell placed over a membrane. The eggs and flesh of the grown animal are considered as delicacies by the African nations. The

crocodiles are said to swim about in large shoals in the rivers; a negro will kill one at a single blow, by stabbing it on the belly where the skin is soft and flexible. It is said, that in some parts of Africa, crocodiles are tamed.

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### THE ALLIGATOR

Very much resembles the crocodile. It is an inhabitant of the warmer parts of the New Continent, where it frequents rivers, lying in wait for the cattle and other animals, and is found in all the rivers of a sufficient size, both near the coast and inland.

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### THE TANGETIC CROCODILE

Differs much from the preceding species in the form of its head, and its covering, but resembles them in habits.

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### SCINKS, WITH ROUND FISH-LIKE SCALES.

The Officinal Scink is a native of many parts of the east; it abounds in Lybia, Syria, Egypt, and Arabia, where it frequents sands soils. Its length is about six or seven inches, or even more; its head is small, its body thick and round, its tail short. The colour of this animal is a pale yellowish brown, with a few dusky bands across the back. It is covered with large fish-like scales of an oily appearance. It is a harmless animal, feeding on insects; it burrows in the sand with great rapidity, and, like many other species, is very abundant in the deserts of the East. It was formerly much valued as a medicine; the Arabs still ascribe to it powerful healing qualities.

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### THE SEA HORSE.

THIS is a small fish of a curious shape. The length seldom reaches twelve inches; the head bears some resemblance to that of a horse, whence originates its name.

Along the back fins run from the head to the tail, which is spirally curved. The eggs of this fish are hatched in a pouch, formed by an expansion of the skin, which in some is placed under the belly, and in others at the base of the tail, and which open to allow the young to get out.

In Europe this fish is often seen in cabinets and museums in a dried state.

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## THE BANDED RATTLE-SNAKE

Is very abundant in North and South America, but it is not found in high latitudes, either to the North or South. It is about four feet or five feet in length, and of yellowish brown colour, marked throughout with bands of a deep brown; the scales on the upper parts of the body are oval, and are carinated, or marked with a ridge. The under parts are of a yellowish brown, duskily marked. The rattle is composed of hard, dry, horny bones, of a roundish form, fitting one into another, and connected with the last joint of the back bone. It is agitated, very strongly, when the animal is angry, and serves as a warning to the unwary traveller, who has offended it. Some authors account for the celebrated power of the rattle-snake, to fascinate its prey, by saying, that the squirrels, or birds, terrified by the well-known noise so close to them, skip from bough to bough, till, quite wearied, they fall almost into the snake's mouth, which stands open to receive them. Others deny that any such power is possessed by the snake, though it appears to be proved by numerous well attested facts. The usual account given is, that the snake fixes his bright eye on the animal which he designs for his prey, and that the creature, as if charmed, approaches by degrees, and enters into the mouth of its enemy. The rattle-snake will not attack, unless offended; its dreadful power of inflicting death appearing to be designed for the purposes of feeding rather than defence. It is easy to escape its pursuit, as the animal is slow in its movements. It generally carries its head on the ground, but when irritated coils up the lower parts of his body, and erects it head with a fierce aspect, at the same time agitating its rattle. It cannot spring from any distance. The bite is deadly in the extreme, inflicting death on the smaller animals in a few minutes; and on man, in a very short time. The snake



the skin, and is said to cause the most acute agonies, and frequently death. It is found in the marshy districts of Sweden.

The COMMON HAIR-WORM, is an inhabitant of stagnant waters. It so nearly resembles a horse-hair, that in many places the people believe that it is a horse-hair animated. It has a remarkable habit of twisting itself into fantastic contortions. Its bite has been known to occasion a whitlow.

The EARTH-WORM is distinguished by a round annulated body, having usually a fleshy belt near its head. Most of the species are rough, with concealed and very minute bristles, placed in lines, and have in the body a lateral opening for respiration.

The COMMON EARTH-WORM is furnished with a set of muscles which move like a spiral wire about a cylinder, and thus it advances or recedes. It is a mistaken notion that these animals are prejudicial to vegetation; on the contrary, by lightening and enriching the soil, they very much promote it. The ravages ascribed to them are committed by the garden slug, and the larvæ of insects. The worm, though destitute of brain and eyes, avoids its enemies with great dexterity. During the winter the worms retire into the ground to avoid being frozen, but do not become torpid.

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## THE LEECH.

The animals of the genus *Hirudo*, LEECH, have the body oblong and truncated; their structure is cartilaginous, and they move by dilating the head and tail, and contracting themselves into the form of an arch.

Some species are viviparous; some deposit their eggs on aquatic plants, and others carry them under their own belly. Several animals proceed from one single egg; some of the smaller species may be multiplied by division.

The MEDICINAL LEECH is found in stagnant ponds and ditches; its colour is of an olive black, and it is marked with six yellowish lines above, and spots of the same colour below; it is about two or three inches in length. The tail is furnished with a circular sucker, and the mouth is armed with three teeth, which leave a triangular mark where they have bitten. This leech is viviparous, producing one young at a time.

## SLUGS.

Slugs have a soft oblong body, furnished above with a fleshy shield, and below with a flattened expansion, which serves the purposes of a foot. On the right side of the breast is a large opening, and on the front of the head are placed four feelers, or horns, as they are popularly called; two of these are of a superior size, and furnished at the tip with an eye.

Among the various species and varieties, we may remark the Common Black Slug, distinguished by its deep wrinkles. A brownish variety is very common in gardens, fields, &c. It crawls very slowly, and leaves a slime wherever it passes.

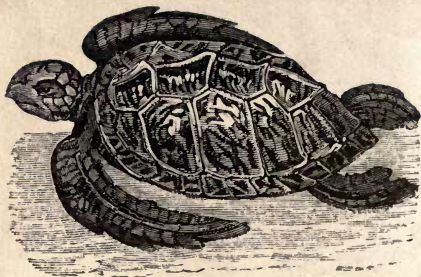
The most interesting of this genus is a variety of the Rustic Slug; called from its curious habits, the Spinning Slug. It is of a whitish colour, with a yellowish shield; it is about three quarters of an inch in length, and inhabits woods, &c. This Slug exudes from the under parts of its body, a sticky liquor, which, on being drawn out, is capable of sustaining the animal at a considerable depth. The Slug appears conscious of its power, and does not fear to cast itself from the brink of any it wishes to quit. The faculty of spinning seems to be exhausted after some exertion, but is renewed by the creature's being left in a humid situation.

Another variety of the same species, half an inch in length, and speckled with black, is the Slug, which has been recommended to consumptive patients. All these animals feed entirely on vegetables, and are produced from whitish gelatinous eggs.

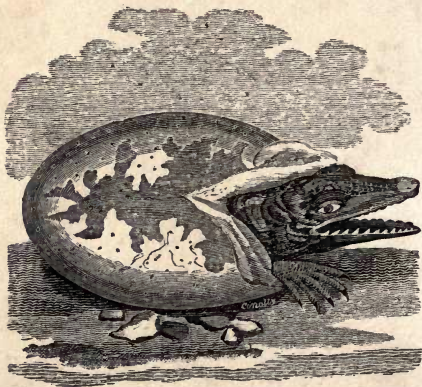
The marine genus *Doris*, is much allied to the slug; its species have been called Sea Snails. The most common of these is the *Doris Papillosa*; it is of the size and colour of a brown Slug, but is covered with soft pointed processes.

The *Phosphoric Pyrosoma* is a very curious animal; its body is of a lengthened tubular form, open at one extremity and closed at the other; the body is scattered over with numerous soft papillæ or tubercles, and there is no appearance of any internal organs. The colour of the animal when at rest is of a pale greenish blue; but when in motion, which it affects by the alternate contraction and dilatation of its body, it assumes a highly luminous





*Turtle.*



*Crocodile's Egg.*

appearance, passing through all the colours of a heated iron bar, from the red to the white heat, and returning through the same changes to its primitive colour. It is several inches in length and of tolerable thickness, and is found very abundantly in particular parts of the Atlantic.

The NAIS PROBOSCIDEA, or LONG SNOUTED NAIS, is about half an inch in length; it is furnished with a long tapering snout, and thorn-like processes on each side its body. This animal, like many of the smaller vermes, possesses a wonderful power of reproduction; if cut or broken, each part will revive, and reproduce the defective organs.

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### THE GREEN TURTLE

Obtains its name from the colour which its fat presents when in a state of perfection. It is one of the largest of the genus, being often above five feet in length, and of the weight of five or six hundred pounds. Its shell is somewhat of a heart-shaped form, and of a dull brown colour, varied with deeper undulations; its flesh is very much esteemed; indeed, by many it is considered as the greatest luxury in animal food. It is very common in the West India islands, where it is much eaten. The green turtles crawl on shore to lay their eggs in a deep sand hole of their own digging. So intent is the female upon the laying her eggs, that a hat may be held to catch them, without her being at all aware of it; if, however, she is disturbed in her preparations, she will abandon the spot she had chosen, and seek for another. She lays her eggs at three or four different times, and finally covers them up with sand; their usual number is fourteen. The heat of the sun hatches them in about three weeks, and the young ones immediately crawl into the sea. The eggs are about the size of tennis balls, round, white, and covered with a skin like parchment: they are good eating.

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### THE LOGGERHEAD

Is the largest of all the turtles excepting the coriaceous. Its shell resembles that of the green turtle, but the colours are stronger and more defined. It is a fierce and even

dangerous animal, defending itself vigorously with its legs and mouth, which latter possesses a very strong grasp. It is amphibious, and inhabits the same seas with the green turtle, extending however to more remote latitudes, being found in the Mediterranean. In a commercial point of view, it is of small value; its flesh is coarse and rank, and its shell too thin for use. It is said to afford a good quantity of oil, proper for burning in lamps.

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## THE IMBRICATED TURTLE

Furnishes the substance called tortoise-shell, of which consist the plates of its shell, excelling those of the other species in thickness, strength, and transparency. A large turtle yields about eight pounds of tortoise-shell. In order to shape the tortoise-shell, it must be softened by steeping in boiling water, and then moulded in a metallic frame of the desired form. When the pieces must be joined, their edges are scraped thin, and being laid over each while heated are submitted to a strong press, by which they are completely united: the same method is used in ornamenting it with precious metals, &c.

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## THE WASP

Has jaws, but no proboscis; the upper wings are plaited, the sting concealed, the body smooth. It is a very extensive genus, and shares with the bee the reputation of the skilful architect. The *Vespa Vulgaris*, or common Wasp makes a nest in some sunny bank. It is of a round form, about ten inches in diameter, inclosed in several layers of covering. The cells are placed in stories of one in height, which are supported one over the other by pillars; the whole formed of a substance like coarse paper, consisting of the fibrous parts of vegetables, united by a glutinous matter from the Wasp's mouth. The swarm consists of a great number of working Wasps, a few males, and fewer females. The females deposit a single egg in each cell. The larvæ are like the maggots of the bee, and the pupæ like the perfect insect, half-formed and whitish. The Wasps lay up no store for winter; the few who survive that season remaining torpid. They eat fruits, and decayed vegetable and animal matter.

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## THE HIVE-BEE

Is celebrated for its ingenuity and industry, in forming its habitation, and providing food for the winter season. The young swarms come out about June, and being settled in a hive, they immediately begin to form the comb. The cells are sexagonal, placed in rows of two deep, their bases together. Each set forms a roundish plate covered up, and gradually rounded at the edges; these are placed in layers, with their edges towards the top and bottom; the upper cells are smaller and neater than the lower. These cells are destined for three different contents; the eggs, the honey, and bee-food. One egg is deposited by the queen in each cell, and there hatches into a little worm, which feeds on the jelly-like substance on which it is placed, till in about six days it attains its full size; the labouring Bees then close the entrance of the cell, which the Maggot lines with silky threads. In its pupa state it differs but little from the perfect Bee; on its first leaving its cell, it is weak and feeble, and attended and fed with great assiduity by the other Bees. There is but one queen in each hive, to whom the greatest attention is paid. The males are few in number, and are destroyed by the others in a month or two from their birth. The males are larger than the others, but not so long as the queen. The labourers are the smallest, and are generally 16 or 18,000 in one hive. They perform all the labours, building the comb, and gathering honey, &c. The wax is an oily secretion of their own bodies, found between the scales of the abdomen. The Bee-food is formed of the farina of flowers, and some animal juice in their own mouths. The honey is also obtained from the flowers by some peculiar process. It is said, that the queen larva is fed with a different food. The swarming is supposed to arise from the want of room in the hive.

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THE POPPY BEE.

Forms a cell in the ground, which she carefully lines with curiously cut pieces of the petals of the scarlet poppy. On the bottom she piles a store of a paste mixed of honey



and farina, on which she deposits her egg, and finally closes up the aperture with leaves, replacing the earth, so as quite to conceal the entrance.

Some of the wild Bees form nests of leaves, each species selecting a peculiar tree: that of the rose-tree takes the edge of the leaf between her legs, and cuts with her strong jaws in a curved line, so as to form a piece narrow at one end, and broad at another; having one edge formed by the indented edge of the rose leaf; when she has almost completed her job, she balances her wings as for flight, and carries off her spoil in triumph. The cell is composed of three pieces carefully folded over each other, with the serrated edge outwards, and the narrow ends bent downwards in the shape of a thimble, all so compact, that, without the help of a cement, it retains the liquid honey. The end is closed with three circular pieces, exactly fitted to the edges, and presenting a concave surface, in which is placed the convex end of the next cell. Six or seven such are placed in this cylindrical form, and each is provided with a rose-coloured paste of honey and farina, and a single egg. The whole is placed either under ground, or in the cavities of walls and decayed wood.

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### THE MASON BEE

Constructs her nest of mortar made of sand and glue from her own mouth; the cells are close to each other, and under a common covering. These nests last for several seasons, and are often the occasion of contentions between the Bees.

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### THE WOOD PIERCER

Forms cavities in strong timber, which it divides by partitions of a paste of wood dust, and provides with food.

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### THE CANDING BEES

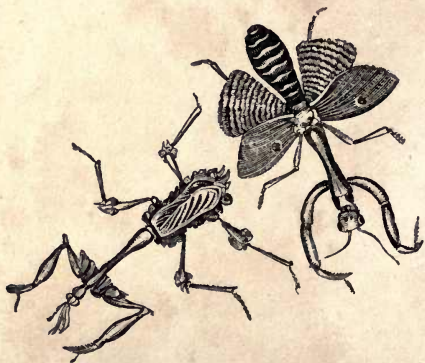
Form or find a cavity, which they line with moss, and furnish with cells for their young. Their mode of conveying the moss is very curious. Having found some that



*Spiders.*



*Flea, magnified.*



*Locust.*

suits them, they stand in a row, head to tail, and pass it from one to another under their bodies. The Bee is larger than the queen of the hive bee.

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## THE FLEA.

The histories of these animals with which we are the best acquainted, are the first objects of our chiefest curiosity. There are but few well informed of the agility and blood thirsty disposition of the Flea, or of the caution with which it comes to the pursuit. This insect, which is not only the enemy of mankind, but of the dog, cat, and several other animals, is found in every part of the world, but bites with greater severity in some countries than in others. Its numbers in Italy and France are much greater than in England; and yet its bite is much more troublesome here than I have found it in any other place. It would seem that its force increased with the coldness of the climate, and, though less prolific, that it became more predaceous.

If the flea be examined with a microscope, it will be observed to have a small head, large eyes, and a roundish body. It has two feelers, or horns, which are short, and composed of four joints; and through which it sucks the blood in large quantities. The body appears to be all over curiously adorned with a suit of polished sable armour, neatly jointed, and beset with multitudes of sharp pins, almost like the quills of a porcupine. It has six legs, the joints of which are so adapted, that it can, as it were, fold them up one within another; and when it leaps they all spring out at once, whereby its whole strength is exerted, and the body raised above two hundred times its own diameter.

The young fleas are at first a sort of nits or eggs, which are round and smooth, and from these proceed white worms, of a shining pearl colour; and in a fortnight's time they come to a tolerable size, and are very lively and active, but if they are touched at this time, they roll themselves up in a ball: soon after this they begin to creep, like silkworms that have no legs, and then they seek a place to lie hid in, where they spin a silken thread from their mouth, and with this they enclose themselves in a small round bag or case, as white within as writing paper

but dirty without; in this they continue for a fortnight longer, after which they burst from their confinement perfectly formed, and armed with powers to disturb the peace of an emperor.

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## THE LOCUST.

THIS insect is about three inches long, and has two horns or feelers an inch in length. The head and horns are of a brownish colour; it is blue about the mouth, as also on the inside of the larger legs. The shield that covers the back is greenish, and the upper side of the body brown, spotted with black, and the under side purple. The upper wings are more transparent, and of a light brown, tinged with green, but there is a dark cloud of spots near the tips. This is that insect that has threatened us so often with its visitations, and that is so truly terrible in those countries where it is bred. There is no animal in the creation that multiplies so fast as these, if the sun be warm, and the soil in which their eggs are deposited be dry. Happily for us, the coldness of our climate, and the humidity of our soil, are no way favourable to their production; and as they are but the animals of a year, they visit us and perish.

The Scripture, which was written in a country where the locust made a distinguished feature in the picture of nature, has given us several very striking images of this animal's numbers and rapacity. It compares an army, where the numbers are almost infinite, to a swarm of locusts; it describes them as rising out of the earth, where they are produced; as pursuing a settled march to destroy the fruits of the earth, and co-operation with Divine indignation.

When the locusts take the field, we are assured, they have a leader at their head, whose flight they observe, and pay a strict attention to all his motions. They appear at a distance like a black cloud, which, as it approaches, gathers upon the horizon, and almost hides the light of day. It often happens that the husbandman sees this imminent calamity pass away without doing him any mischief, and the whole swarm proceed onward to settle upon the labours of some less fortunate country. But wretched is the district upon which they settle: they ravage the

meadow and the pasture ground, strip the trees of their leaves, and the garden of its beauty; the visitation of a few minutes destroys the expectation of a year, and a famine but too frequently ensues. In their native tropical climates they are not so dreadful as in the more southern parts of Europe. There, though the plain and the forest be stripped of their verdure, the power of vegetation is so great, that an interval of three or four days repairs the calamity; but our verdure is the livery of a season, and we must wait till the ensuing spring repairs the damage. Besides, in their long flights to this part of the world, they are famished by the tediousness of their journey, and are therefore more voracious wherever they happen to settle. But it is not by what they devour, that they do so much damage, as by what they destroy. Their very bite is thought to contaminate the plant, and to prevent its vegetation. To use the expression of the husbandman, they burn whatever they touch, and leave the marks of their devastation for two or three years ensuing. But if they be noxious while living, they are still more so when dead; for wherever they fall, they infect the air in such a manner, that the smell is insupportable. Orosius tells us, that in the year of the world 3800, there was an incredible number of locusts which infected Africa; and after having eaten up every thing that was green, they flew off, and were drowned in the African Sea, where they caused such a stench, that the putrefying bodies of hundreds of thousands of men could not equal it.

In some parts of the world the inhabitants turn what seems a plague to their own advantage. Locusts are eaten by the natives in many kingdoms of the East; and are caught in small nets provided for that purpose.

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## THE SPIDER.

Formed for a life of rapacity and incapable of living upon any other than insect food, all its habits are calculated to deceive and surprise; it spreads toils to entangle its prey, it is endued with patience to expect its coming, and is possessed of arms and strength to destroy it when fallen into the snare.

In this country, where all insect tribes are kept under by human assiduity, the spiders are small and harmless. We are acquainted with few but the House Spider, which

weaves its web in neglected rooms ; the Garden Spider, that spreads its toils from tree to tree, and rests in the centre ; the Wandering Spider, that has no abode like the rest ; and the Field Spider, that is sometimes seen mounting, web and all into the clouds. These are the chief of our native spiders, which, though reputed venomous, are entirely inoffensive. But they form a much more terrible tribe in Africa and America. In those regions, where all the insect species acquire their greatest growth, where the butterfly is seen to expand a wing as broad as our sparrow, and the ant to build an habitation as tall as a man, it is not to be wondered at that the spiders are seen bearing a proportionable magnitude. In fact, the bottom of the Martico spider's body is as large as a hen's egg, and covered all over with hair. Its web is strong, and its bite dangerous. It is happy for us, however, that we are placed at a distance from these formidable creatures, and that we can examine their history without feeling their resentment.

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### THE HERCULES BEETLE,

A native of South America, is five or six inches in length, with brownish grey wing-covers, marked with black spots. The thorax is armed in front with an immense double horn : the upper one longest, bent downwards, and furnished underneath with thick hairs like velvet ; the lower one shorter, and toothed on its upper surface. The female has no horns. There are no others of the tribe so large, though some approach pretty near to it.

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### THE BURYING BEETLE

Is found in the deserts of Tartary, and other places. Its wing-covers are black, striped, spotted, and rough. These Beetles are possessed of surprising strength ; and for the purposes of food for themselves and their future young, they bury the bodies of small birds and animals many times their own size.

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## THE COCKCHAFER

Is well known in England ; and, in the larva state, is very voracious and destructive. The egg is laid in the earth ; and from it proceeds a white worm with six legs, a red head, and strong claws : it lives four years before it assumes the chrysalis form. During this time, it does great damage by feeding on the roots of trees and plants, which in consequence die. It spins a case, on assuming the pupa form, and continues in it through the year. The perfect Cockchafers eat the green leaves of trees, and do almost as much harm in this state as in the other. Immense swarms of these insects have occasionally appeared in different places, doing great injury to vegetation in general. The Rose-chaffer is a very beautiful insect, found in England, of a burnished green or copper colour, about an inch long. The larvæ eat the roots of garden plants, and live four years.

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## THE PILL-CHAFER

Is rather more than an inch in length, and of a dusky black colour or greenish above, and brilliant blue below. It is found in both hemispheres, and provides for the eggs it lays round and minute balls of dung, placing an egg in each. These pellets the parent deposits three feet underground. In this last operation the Chafers mutually assist each other.

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## THE SCORPION.

There is scarcely an insect without wings that is not obnoxious to man : the smallest have the power of annoying him, either by biting or stinging him : though each is in itself contemptible, they become formidable from their numbers. But of all this class, there is none so terrible as the Scorpion, whose shape is hideous, whose size among the insect tribe is enormous, and whose sting is generally fatal. Happy for England, the scorpion is entirely a

stranger among us! In several parts of the continent of Europe, it is but too well known, though it seldom grows above four inches long; but in warm tropical climates it is seen a foot in length, and in every respect as large as a lobster.

The scorpion is one of the largest of the insect tribe, and not less terrible from its size than its malignity. It resembles a lobster somewhat in shape, but is infinitely more hideous. There have been enumerated nine different kinds of this dangerous insect, chiefly distinguished by their colour; there being scorpions yellow, brown, and ash-coloured; others that are the colours of rusty iron, green, pale yellow, black, claret-colour, white, and grey.

There are few animals more formidable, or more truly mischievous than the scorpion. As it takes refuge in a small place, and is generally found sheltering in houses, so it cannot be otherwise than that it must frequently sting those among whom it resides. In some of the towns of Italy and France, in the province of Languedoc, it is one of the greatest pests that torment mankind; but its malignity in Europe is trifling when compared to what the natives of Africa and the East are known to experience. In Batavia where they grow twelve inches long, there is no removing any piece of furniture without the utmost danger of being stung by them. Bosman assures us, that along the Gold Coast they are often found larger than a lobster, and that their sting is inevitably fatal. In Europe, however, they are by no means so large, so venomous, or so plentiful. The general size of this animal does not exceed two or three inches, and its sting is very seldom found to be fatal. Maupertius, who made several experiments on the scorpion of Languedoc, found it by no means so invariably dangerous as had till then been represented. He provoked one of them to sting a dog in three places of the belly, where the animal was without hair. In about an hour after, the poor animal seemed greatly swollen, and became very sick: he then cast up whatever he had in his bowels, and for about three hours continued vomiting a whitish liquid. The belly was greatly swollen when the animal began to vomit, but this operation always seemed to abate the swelling; which alternately swelled, and was thus emptied, for three hours successively. The poor animal after this fell into convulsions, bit the ground, dragged himself along upon his forefeet, and at last died, five hours after being bitten. He was not partially swollen round the place which was bitten, as is usual after the

sting of a wasp or a bee, but his whole body was inflated, and there only appeared a red spot on the places where he had been stung. Some days after, however, the same experiment was tried upon another dog, and even with more aggravated cruelty; yet the dog seemed no way affected by the wounds, but howling a little when he received them, continued alert and well after them; and soon after was set at liberty, without showing the smallest symptoms of pain. So far was this poor creature from being terrified at the experiment, that he left his own master's house to come to that of the philosopher, where he had received more plentiful entertainment.

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### THE AMERICAN SCORPION

Is yet smaller than the European, and of a more slender form. The African Scorpion is the most formidable species, the body alone measuring four inches in length, and ten including the tail and claspers. The sting of this species is very severe, sometimes proving fatal. The poison is ejected through two small openings on each side of the sting. The Scorpions are viviparous animals; the young are at first of a light colour, but grow darker by age.

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### THE MOLE CRICKET,

Which is found in many parts of Europe as well as England, is about two inches long, of a dull brown colour, and very strange appearance. Its fore-claws have a great resemblance to those of a Mole, being broad, flat, and armed with claws: they serve also the same purpose, enabling the animal to burrow with great expedition. The female Mole Cricket forms under ground a nest about the size of a hen's egg, in which she deposits her eggs to the amount of about 150. The nest is secured by various external fortifications, and watched by the mother with great assiduity. These insects eat the roots of plants, and often do great damage in gardens.

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## THE BUTTERFLY.

The number of these beautiful animals is very great ; and though Linnæus has reckoned up above seven hundred and sixty different kinds, the catalogue is still very incomplete. Every collector of butterflies can show undescribed species ; and such as are fond of minute discovery, can even produce animals that have been examined only by himself. In general, however, those of the warm climates are larger and more beautiful than such as are bred at home ; and we can easily admit the beauty of the butterfly, since we are thus freed from the damage of the caterpillar. It has been the amusement of some to collect these animals from different parts of the world, or to breed them from caterpillars at home. These they arrange in systematic order, or dispose so as to make striking and agreeable pictures ; and all must grant, that this specious idleness is far preferable to that unhappy state which is produced by a total want of employment.

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## THE MOTH, CATERPILLAR, AND AURELIA.

Caterpillars may be easily distinguished from worms or maggots, by the number of their feet, and by their producing butterflies or moths. When the sun calls up vegetation, and vivifies the various eggs of insects, the caterpillars are the first that are seen upon almost every vegetable and tree, eating its leaves, and preparing for a state of greater perfection. They have feet both before and behind, which not only enable them to move forward by a sort of steps made by their fore and hinder parts, but also to climb up vegetables, and to stretch themselves out from the boughs and stalks, and to reach their food at a distance. All of this class have from eight feet, at the least, to sixteen ; and this may serve to distinguish them from the worm tribe, that never have so many. The animal into which they are converted is always a butterfly or a moth ; and these are always distinguished from other flies, by having their wings covered over with a painted dust, which gives them such various beauty. The wings of flies are transparent, as we see in the common flesh fly, while those of the beetle are hard, like horn ; from such the wings of a butterfly may be easily distinguished, and words would obscure their differences.

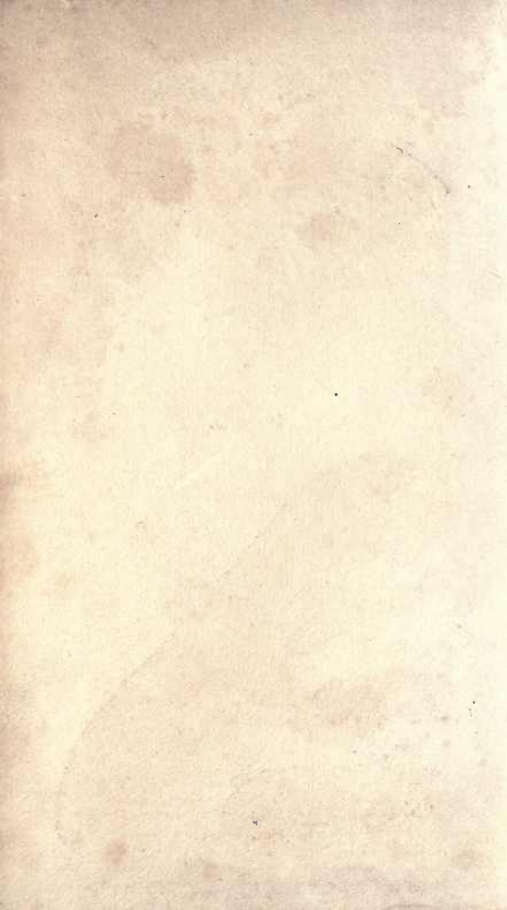
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*Butterfly.*



*Moth, Caterpillar, and Aurelia.*



## THE ANT,

Has a large head, with pointed, equal antennæ; the mouth with large jaws, and four unequal feelers; thorax narrow behind, and furnished with an upright scale; abdomen roundish; males and females winged; neutrals not: females and neutrals furnished with a concealed sting. There are many species of this genus, differing in size, colour, and detail of manners. They all live like the bees, &c. in societies, composed of a few males and females, and a multitude of labourers, who perform the offices of builders, foragers, nurses, guards, warriors, &c. Some Ants construct hillocks, externally a confused heap of straw, &c.; but admirably arranged within, into apartments, store-rooms, galleries, &c. Others excavate trees and dry timber, forming story above story, with corridors, galleries, large apartments, all with slightly concave roofs, the partitions of which are admirably delicate and fine. Some work as masons, building their habitations of mortar.

They all take the greatest care of their young; as soon as one of the females has laid an egg, it is taken by one of the labourers in the mouth, and kept moistened there, as if to preserve it from drying. It is soon hatched, and the larva is assiduously tended, being fed from the mouth of its nurses. When full grown, the larva spins a small oval cocoon, white or yellowish in different species; these, as well as the eggs and larvæ, are carried every day to the top of the nest for the sake of the sun's heat; and, at the proper time, the silken case is opened by one of the attendant ants, by whom the little ant is also assisted in its first use of its complete faculties. The young males and females fly in swarms from the nest as soon as hatched; some return; some found new colonies; but the greater part perish. The Ants appear to have the power of communicating their wants and wishes, as they do not immediately apply themselves to the same exact labours, like many other insects, but appear to suit their undertakings to their necessities. They eat a great variety of substances, and are very fond of sweets. This taste leads them to follow the Aphides, whose excrements are quite sweet; they even keep them near the nests and contrive to induce them, by caressing them with their antennæ, to afford them at their need their favourite food. To the same purpose do they apply the Cynips, whose very



differently tasted juices are in esteem among them. Some species will not work, but carry off the young of others, to become their servants, and nurse their future progeny and captives; taking care, however, never to introduce the foreign males and females. These depredations are not committed with impunity; the attacked opposing themselves, but in vain, to the robbery. Some fight for the possession of their Aphides, or for the places where the food is found. In these combats many are slain, and many taken captive. These, and other particulars equally curious, are admirably detailed in the French work of M. Huber, on the Indigenous Ants.

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### THE SNAIL.

THESE creatures inhabit shells, and are furnished with four horns, at the ends of which are placed the eyes. The animal can push out or draw back these horns at pleasure. The mouth is armed with teeth, with which it chews leaves and vegetables. It is a curious fact that two of these insects at a certain time of the year station themselves an inch or two apart, and throw at each other little darts of a horny substance, and very sharp. After a mutual discharge of these love weapons, they become friends, and lay their eggs, which are about the size of a pea. By the help of a magnifying glass, the young Snail can be seen in the egg without its heavy shell on its back. The shell has at first only one convolution, but the circles increase in number with the growth of the animal; never, however, exceeding four and a half in the Garden Snail.

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### THE COMMON GLOW-WORM

Is a very curious animal. During the summer, as late as August, on dry banks, about woods, pastures, hedge-ways, &c. it is seen by its light, which is vivid and beautiful, in the form of a round spot. It is still doubtful whether the male be provided with this ornament. The animal is about three quarters of an inch long, of a dull earthy brown on the upper parts, more or less tinged with rose colour beneath; from the two or three last joints, which are sulphur-coloured, proceeds the light, yellowish, inclining to green, and appearing to be phosphoric. This insect differs but little in its three states: the light is brightest in the perfect insect. The Glow-worm is slow in moving, seeming to drag itself forward by starts.

## THE GRASSHOPPER.

THAT animal which is called the Grasshopper with us, differs greatly from the cicada of antiquity; for as our insect is active enough in hopping through the long grass, from whence it has taken its name, the cicada had not this power, but either walked or flew. The little hissing note also of our grasshopper is very different from the song of the cicada, which was louder and far more musical. The manner in which this note is produced by the two animals, is very different; for the cicada makes it by a kind of buckler, which the male has beneath his belly; the grasshopper by a transparent membrane that covers a hole at the base of its wings. There is still a greater variety in all these with regard to shape and colour. Some are green, some black, some livid, and some variegated; but many of them do not show all their colours till they fly. Some have long legs, some short, some with more joints, others with fewer. Some sing, others are mute; some are innocent, doing no damage to the husbandman, while others do such prodigious mischief, that they are looked upon in some countries as one of the scourges of the incensed Divinity.

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THE BUG.

This animal, if examined minutely, appears to consist of three principal parts, the head, the corslet, and the belly. It has two brown eyes, that are very small, and a little prominent, besides two feelers, with three joints; underneath these there is a crooked trunk, which is its instrument of torture, and which, when in motion, lies close upon the breast. The breast is a kind of ring, in which are placed the two first pair of legs. The belly consists of nine rings, under which are placed two pair of legs more, making six in all. Each leg has three joints, which form the thigh, the leg, and the foot, which is armed with a crooked claw, like a hook. The body is smooth, except a few short hairs, that may be seen by the microscope about the vent, and to the two last rings. Its motion is slow and unwieldly; yet its sight is so exquisite, that the

instant it perceives the light, it generally makes good its retreat, and they are seldom caught, though the bed swarms with them.

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## THE CARCIBUS CREPITANS, OR BOMBARDIER

Is a middling sized insect, found in many parts of Europe. Its head, thorax, legs, and antennæ are of a red brown colour, and its belly and wing-sheaths blackish blue. When attacked, it seldom flies, concealing itself chiefly under stones, &c. When pursued or provoked, it discharges, with a smart explosion, a blueish vapour, with a very bad smell. It is able to repeat this operation very often, and is furnished with a little bladder which supplies the vapour. This is its means of defence against its enemies, and particularly a large insect of its own genus.

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## THE COMMON EAR-WIG

Is too well known to require description. The wings of the Ear-wig are of a curious and beautiful construction; they are very large, in proportion to the size of the animal, transparent, and slightly varied with the colours of the rainbow; they are most wonderfully folded under their short sheaths. The Ear-wig flies only by night, and can hardly be made to open its wings by day-light. The female deposits her eggs in a place where they will be secured from too great heat or moisture: the larvæ are very small, and very little different from the parent; after growing, and many times changing its skin, the likeness becomes complete. The female Ear-wig is said to guard her young with all the assiduity of the mother hen; covering them with her own body, &c. The Ear-wig feeds chiefly on decayed fruit and vegetable substances; but when in want, it will devour its own species. It is now considered as certain, that the Ear-wig has no propensity to take up its abode in the human ear.

THE END.



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